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THE DEVELOPMENT OF RICARDO'S THEORY OF VALUE.

Modern discussion of the validity of the economic system of David Ricardo has centred about the theory of value. On the one hand, Jevons's classic attack has been maintained with undiminished vigor by a group of critics among whom the Austrian representatives loom up most conspicuously. On the other hand, Professor Marshall has broken a mighty lance for the essential correctness of the Ricardian theory, and has inspired, in this as in other directions, a distinct reappreciation.

But this doctrinal debate has been waged with such heat that polemic endeavor has in no small degree replaced textual study. Fallacy hunting has been met by generous interpretation, hyper-criticism has been answered by apology, and, in intent concern upon establishing or overthrowing alleged errors, both critics and supporters have relatively neglected Ricardo's original exposition of value and the successive changes which that exposition underwent.

Moreover, students of the Ricardian economics have received by successive publication since 1887 an amount of Ricardo's informal writing hardly less in extent than the aggregate of his formal composition. Such an accession in the case of an economist of indistinct personality, profound thought, and unsystematic exposition could not fail to be productive of important results. The series of letters to Malthus,[1] McCulloch,[2] and Trower[3] respectively, and the privately printed correspondence of his Continental tour,[4] have not only modified the common estimate of Ricardo's personal character, in acquainting us for the first time with his every-day activity, but have corrected glaring misconceptions of certain of his fundamental doctrines. Even more notable than this, they have made it possible to follow the course of Ricardo's mental history as an economist, and to study with some exactness the evolution of his most characteristic theories. Something of this has already been done, but most of it still awaits cautious and precise interpretation.

To trace in such spirit the origin and development of the theory of value in Ricardo's thought and writing, both as a basis for future critical estimate and as an episode in the history of economic thought, is the purpose of the following pages.

I.

There are three clearly defined phases in Ricardo's treatment of value, corresponding here as throughout to the influences which shaped his mental history as an economist. The first began with his acquaintance with syste-

[1] *Letters of David Ricardo to Thomas Robert Malthus*, 1810-1823 (ed. Bonar, Oxford, 1887).

[2] *Letters of David Ricardo to John Ramsay McCulloch*, 1816-1823 (ed. Hollander, New York, 1895).

[3] *Letters of David Ricardo to Hutches Trower and Others*, 1811-1823 (ed. Bonar and Hollander, Oxford, 1899).

[4] *Letters written by David Ricardo during a Tour on the Continent* (privately printed, Gloucester, 1891).

matic economic writing and extended through the bullion controversy, and might be described as a consistent exposition of Adam Smith's original concept of value. The second phase was incident to the corn-law discussions and to the debated policies associated therewith, and found expression in the chapter on value in the first edition of the *Principles of Political Economy and Taxation*. Its keynote was theoretical warrant for the propositions that higher wages did not necessarily mean higher prices, and that a fall in wages was compatible with a rise in prices. The third phase consisted, in the main, of spirited controversy with friends and critics as to the adequacy of labor as a measure of value, and was still in progress at the time of Ricardo's death.

In inception, Ricardo's theory of value probably dated back to early critical reading of the *Wealth of Nations*. It took definite shape in correction of Adam Smith's exposition, and further analyses proceeded for a decade strictly within these lines. An acute student of the Ricardian economics has said that "we are indebted to the Bullion controversy for the Ricardian theory of value."[1] But this can be true only in the most general sense. The subject had become fairly clear in Ricardo's mind long before 1809; and the effect of subsequent currency controversies—such as that growing out of Bosanquet's assertion that years of scarcity and high taxation, and not excessive circulation, were responsible for the rise in prices—was, at most, clearer definition and further application of a theory of value and price then already well in mind rather than independent formulation of a new theory.[2]

[1] Cannan, *A History of the Theories of Production and Distribution in English Political Economy from 1776 to 1848* (London, 1893), p. 388.

[2] See Ricardo, *Reply to Mr. Bosanquet's Practical Observations on the Report of the Bullion Committee* (London, 1811), chap. viii.; in *Works* (ed. McCulloch), pp. 354–359; *cf.* also Bosanquet, *Practical Observations on the Report of the Bullion Committee* (second edition, corrected, London, 1810), p. 62 *et seq.*

Ricardo's concept of value, in its first or Smithian phase, was on the verge of change in 1815. Moreover, in *An Essay on the Influence of a Low Price of Corn on the Profits of Stock*, published in that year, the theory of value figured far less as a novel or basic doctrine, requiring explicit assertion or detailed exposition, than as a restatement of a familiar principle cited merely to establish the proposition that with the progress of wealth the landlord might be expected to benefit not only "by obtaining an increased quantity of the produce of the land, but also by the increased exchangeable value of that quantity."[1]

But even from this more or less indirect and partial exposition it is not difficult to reconstruct the theory of value which we may conceive as attained by Ricardo in critical study of the *Wealth of Nations*, and as asserted by him thereafter in argument and correspondence until the economic controversies of 1813-17 gave an effective impulse in another direction.[2]

Starting from Adam Smith's recognition—in itself at least as old as Aristotle—of the two different meanings attaching to the word "value" (namely, value in use and value in exchange), Ricardo pursued the course then already made familiar by successive expositors. Value in use is utility. Utility, associated with scarcity and necessary expenditure of labor, confers value in exchange, with which alone economic analysis is concerned. Of the three attributes of exchange value, utility, although always an "absolutely essential"[3] condition, is insufficient as the basis of exchange relations. On the other hand, the sec-

[1] *An Essay on the Influence of a Low Price of Corn on the Profits of Stock*, in *Works* (ed. McCulloch), p. 377.

[2] The nearest approach to an exposition of this first phase of Ricardo's treatment of value to be found in his own writings is represented by pages 1-15 of chapter i., "On Value," in the first edition (1817) of the *Principles*. The chapter as published was undoubtedly composed at different times and under the dominance of different ideas, and it is not entirely fanciful to regard either the formal break (omitted after the first edition) on page 12, or the end of the second paragraph on page 15, as the line of stratification.

[3] *Principles* (1817), p. 2.

ond attribute, scarcity,—relative to "the varying wealth and inclinations" [1] of prospective purchasers,—is the sole determinant of the value of the limited number of commodities whose quantity cannot be increased by labor.

It is not, however, with this bare handful of scarcity goods, but with the great mass of freely produced, competitively exchanged commodities, such as can be increased in quantity by the exertion of human industry, and on the production of which competition operates without restraint, that Ricardo's, like Smith's, further discussion "of commodities, of their exchangeable value, and of the laws which regulate their relative prices," [2] is associated.

At the basis of exchangeable or relative value lies the concept of positive or absolute value. Possessing utility and scarcity, commodities are valuable in themselves, in proportion to the capital employed and the labor expended in their production.[3] Positive value is thus the same as cost of production, consisting of wages of labor and profits of stock.[4]

But the subject of inquiry is not the value of a commodity in itself, but in its relation to other commodities. Positive values must thus be compared and measured. The positive value of a commodity reduced to commensurable form for the determination of relative equivalences constitutes its exchangeable or relative value.[5]

[1] *Principles* (1817), p. 3. [2] *Ibid.*, p. 3.

[3] "I do not, I think, say that the labour expended on a commodity is a measure of its exchangeable value, but of its positive value. I then add that exchangeable value is regulated by positive value and therefore is regulated by the quantity of labour expended." *Letters of Ricardo to Trower*, p. 151; cf. *ibid.*, p. 162.

[4] "Mr. Malthus appears to think that it is a part of my doctrine, that the cost and value of a thing should be the same;—it is, if he means by cost, 'cost of production' including profits." *Principles* (1821), p. 46, note; cf. *ibid.*, p. 107; also *Essay on Influence of Low Price of Corn*, in *Works*, p. 377, note; and, finally, Malthus, *Measure of Value*, p. 4.

[5] *Cf.* the question discussed at the meeting of the Political Economy Club on January 5, 1824, with Torrens in the chair and with Malthus, Tooke, Mushet, James Mill, Senior, Warburton, and Grote among those in attendance: "In what does the circumstance which determines Exchangeable

Up to this point there is little, if anything, to distinguish Ricardo's thought from Adam Smith's exposition. In stating it, Ricardo would probably have slipped more easily than Smith into the loose habit of speaking of labor expenditure as a cause—indeed, the sole cause—of exchangeable value,—"the original source of exchangeable value."[1] But this was as far from Ricardo's real meaning as it was from Smith's. On the other hand, Ricardo was even less concerned than Smith with the value of a commodity in itself,—that is, with its intrinsic significance to its possessor,—but, exclusively, with the several amounts of other commodities which it might secure in exchange. His interest thus lay not with positive, but with relative value, and consequently less with the cause than with the measure of exchange value.

Adam Smith had asserted that in "that early and rude state of society which precedes both the accumulation of stock and the appropriation of land"[2] commodities exchange in proportion to the quantities of labor expended in acquiring them. But even in the economic world which Adam Smith saw about him such a measure of exchange value was clearly unworkable. Few, if any, commodities were the product of labor alone. Land, labor, and capital co-operated in production, and the great mass of goods embodied the association in various proportions of these three factors. Such composites could clearly not be estimated in terms of a single unit. A product embodying *a*, land, and *b*, labor, and *c*, capital, was incommensurable, in the manner proposed, with respect to a commodity to which *c*, land, and *a*, labor, and *b*, capital, contributed.

Adam Smith met, or failed to meet, this difficulty by unconsciously or tacitly substituting—in Professor Wieser's

value differ from the measure of it?" *Minutes of Proceedings, 1821–82*, vol. iv. p. 60.

[1] *Principles* (1817), p. 5.

[2] *Wealth of Nations*, Book I. chap. vi. (ed. Rogers, vol. i. p. 49).

phrases[1]—an "empirical" for the earlier "philosophical" measure of value. He asserted that in ordinary industrial intercourse—that is, as soon as capital had been accumulated and a rent paid for land—relative exchange values were determined by the respective amounts of labor which the several commodities would command instead of by the several amounts necessary for their respective production. Such a substitution involved, up to a certain point, no logical fallacy, or was possible at no greater cost than the sacrifice of doctrinal continuity. In so far as goods are the product of labor alone and that labor remains constant,[2] the circumstance that commodity A exchanges, over any considerable period, for commodity B, makes it possible to assert that the value of each is measured either (*a*) by the amount of labor involved in its production or (*b*) by the amount of labor which possession of the commodity will command. Under such conditions the producer may be expected to receive for his product an amount of labor equivalent to that embodied therein, and either unit of measurement is applicable.

But the identity is no longer visible when production has become capitalistic, and interest and, with Adam Smith, rent enter into cost of production, co-ordinate with wages. The first mode of measurement is now distinctly inadequate. Dependent upon it alone, the values of bread produced by labor alone, of shoes produced by labor associated with capital, and of cloth to which labor, capital, and land have contributed, are incommensurable. On the other hand, the second unit of measurement is workable. Such commodities can be compared with regard to the respective amounts of labor which they will command, even though their several costs of production cannot be reduced to terms of labor. Thus by a manner

[1] Wieser, *Natural Value*, xxvii-xxviii.

[2] An assumption which Ricardo was unwilling to concede. Cf. *Principles* (1817), p. 6.

of empirical parallelism a "labour commanded" unit replaced a "labour embodied" unit, and became the characteristic feature of Adam Smith's theory of value.[1]

The transition once effected, Smith undertook to find further and distinctive warrant for "commanded labour"[2] as "the only universal as well as the only accurate measure of value, or the only standard by which we can compare the value of different commodities at all times and at all places."[3] But this contention, although far more prominent in exposition, was distinctly subordinate in theoretical importance, and offered an easy target for critical attack.

The logical consistency of Ricardo's thought resented Adam Smith's empiricism. Short work was made of the claim that "commanded labour" formed an absolutely accurate standard of value. From none of the sources of fluctuation which disqualified—as Adam Smith himself had clearly shown—gold or silver from serving as an invariable standard were the proposed substitutes free.[4]

But Ricardo's prime dissent was more fundamental. That a particular unit of measurement should be adequate for determining the exchangeable value of commodities in primitive industrial conditions, but must be abandoned after the accumulation of capital and the appropriation of land had shaped economic production, seemed to Ricardo's mind negligent and fallacious rea-

[1] It is likely that an identical train of thought induced Malthus in his *Political Economy* (1820) to incline, although not completely to assent, to "the quantity of labour which a commodity will command" as a measure of value rather than "the quantity it has cost," and even more in his *Measure of Value* (1823) to urge Adam Smith's "labour commanded" unit as a measure of value in preference to Ricardo's "labour embodied" unit, or even to his own earlier "mean between corn and labour." It is characteristic that the transition which Adam Smith merely suggests, Malthus describes with naïve explicitness. *Cf.* his *Political Economy*, p. 124, and his *Measure of Value*, pp. 15, 16. This subject is treated incidentally, but with much originality and acuteness, by Professor Patten in his *Theory of Dynamic Economics* (1892), chap. vi.

[2] Represented, practically, by corn for long and by silver for short periods.

[3] *Wealth of Nations*, Book I. chap. v. (ed. Rogers, vol. i. p. 38.)

[4] *Principles* (1817), pp. 7-11.

soning. The employment of capital and land as production goods might qualify the original simplicity and universality of the labor measure, and even compel the recognition of particular categories as exceptional. But this was very different from throwing over the entire theory, and comparable rather to that slight modification of the labor theory—recognized by Adam Smith and confirmed by Ricardo—whereby differences in the quality of labor were adjusted by the higgling and bargaining of the market according to "that sort of rough equality which, though not exact, is sufficient for carrying on the business of common life."[1]

Probably even at this period Ricardo would have admitted that we have no knowledge of any one commodity "which now and at all times required precisely the same quantity of labour to produce it," and that a perfect standard of value was therefore unobtainable. Yet he would doubtless have added then, as he did a few years later, that, if we undertake to ascertain what are "the essential qualities of a standard," and to study "the causes of the variation in the relative value of commodities" and "the degree in which they are likely to operate," we shall find that "under many circumstances" . . . "the quantity of labour bestowed on a commodity" is "an invariable standard, indicating correctly the variations of other things."[2]

At this point Ricardo paused. Not yet prodded by James Mill to written exposition nor even impelled by current rebate to consecutive statement, he remained mentally content with the general outline of Adam Smith's concept of value. But this acquiescence was emphatically subject to the reservation, conceived with much of the precision and maintained with all of the vigor that distinguished Ricardo's doctrinal thought, that Adam Smith

[1] *Wealth of Nations*, Book I. chap. x. (ed. Rogers, vol. i. p. 32).

[2] *Principles* (1817), pp. 6, 7, 11, 12.

had erred in abandoning his original measure of value,—namely, "embodied labour,"—and that the same principles determined exchange relations in advanced industrial conditions that prevailed in "that early and rude state of society" which preceded the use of capital and the appropriation of land.

II.

The second phase of Ricardo's treatment of value is directly traceable to the corn-law controversies of 1813–17 and to active discussions thereafter with Malthus, McCulloch, Say, and Torrens as to correlated economic policies. The initial chapter "On Value" in the first edition (1817) of the *Principles* was thus designed less as an independent exposition than as theoretical warrant for certain practical propositions advanced and defended by Ricardo from about 1813 on. Thus (*a*) Ricardo believed, in opposition to Malthus, that lower profits could only result, in the long run, from higher wages; (*b*) he asserted that McCulloch's proposal to scale down the interest on the national debt was neither just nor equitable; and (*c*) he refused all credence to the popular fear that the free importation of corn would be followed by a further disastrous fall in general prices.

It was to give re-enforcement to such definite propositions that Ricardo developed and extended his original concept of value. The prime features of his modified exposition were disagreement with the doctrine that every rise in wages must necessarily be transferred to the price of commodities, and, second, demonstration of the converse dictum, that higher wages were actually compatible with lower prices.

The extent to which this doctrinal development was an incident of the practical controversies noted above will

appear more clearly if the precise points at issue be considered in some greater detail: —

(*a*) The agricultural unrest in England in 1813 and the parliamentary discussions that accompanied it could not fail to attract Ricardo's attention. In the early part of 1814 his controversial correspondence and discussions with Malthus passed from the "old question"[1] of the influence of the currency upon the foreign exchanges to the more immediate problem of the effect of corn duties upon wages, prices, profits, and rent.[2]

Either because it was "the simple belief, common enough among the commercial class of his time,"[3] or, more probably, because it was in essence a legitimate heritage from Adam Smith, Ricardo's position from the outset seems to have been clear and definite: restrictions on imports mean a higher price of corn, the increased price of food causes a rise in wages, higher wages are attended by lower profits and interest, and "it is the profits of the farmer which regulate the profits of all other trades."[4]

The controversy appears to have begun with Malthus's denial that the last proposition, that agricultural profits determine general profits, was any more true than its converse, and consequently that a cheaper method of obtaining food was not the only means of raising profits. Thus a new foreign market, giving a greater demand and higher prices for domestic wares, would mean higher gain in particular trades, higher interest in general, and ultimately higher profits in agriculture.[5]

[1] *Letters of Ricardo to Malthus*, p. 25.

[2] A gap in the Ricardo-Malthus correspondence from January 1 to June 26, 1814, renders it impossible to determine the precise date and occasion of this noteworthy discussion. As early as March 8, 1814, it was well under way; for at that time the differences had apparently been committed to writing, and were read by Hutches Trower. Cf. *Letters of Ricardo to Trower*, p. 4. It is probable that Malthus's *Observations on the Effects of the Corn Laws*, published "in the spring of 1814," was a consequence rather than a cause of the original discussion.

[3] Cannan, *History of the Theories of Production and Distribution* (1893), p. 164.

[4] *Letters of Ricardo to Trower*, pp. 5, 6.

[5] *Ibid.*, p. 5.

Gradually the point at issue took more definite shape. In August, 1814, it was the "effects which must *necessarily* follow from restrictions on the importation of foreign corn." [1] A few months later Ricardo believed facility of obtaining food to be "almost the sole cause," while Malthus admitted that it "may be safely said to be the main cause" of high profits.[2] Before the appearance of Ricardo's *Essay on the Influence of a Low Price of Corn on the Profits of Stock* in 1815, the difference had resolved itself into Ricardo's claim that restrictions on the importation of corn were the invariable, permanent cause of low profits, and Malthus's denial that this consequence was either necessary or peculiar.

With the greater precision of thought brought by this controversy, and even more by Malthus's explanation of the cause and nature of rent, a few months later Ricardo appears to have become aware of a vulnerable point in his theory of the inverse relation between wages and profits. It was impossible to prove that a rise in wages was the exclusive cause of a fall in profits, if it were true that a rise in wages necessarily occasioned a rise in prices. Were the latter the case, the manufacturer simply recouped himself from out of the higher prices of his product for the higher wages he was obliged to pay, and profits remained unchanged. Thus the validity of Ricardo's theory of profits became, in large measure, dependent upon his ability to prove that prices did not necessarily increase as wages rose.[3]

(*b*) The occasion of Ricardo's acquaintance with McCulloch was assertion and defence of the proposition that a rise in the price of corn did not involve a rise in general prices.

[1] *Letters of Ricardo to Malthus*, p. 38. [2] *Ibid.*, p. 46.

[3] Eventually, Ricardo undertook to show that profits would fall when wages rose, even though general prices also rose. Cf. *Principles* (1817), p. 144. But in all likelihood this was an after-thought or certainly an incident of a further analysis of the interrelation of wages and profits.

In the spring of 1816 McCulloch published and sent to Ricardo, with whom he had had no prior intercourse, his *Essay on a Reduction of the Interest of the National Debt*, in which he urged a forcible reduction of the interest on the national debt conformable to the reduced value of corn. The reduction was to be made "in a ratio compounded of the price of corn when the loan was made, of the reduced price of corn, and of the effect of the fall in the price of corn on manufactures." It thus involved a deduction of 40 per cent. from the interest on loans from 1808 to 1813, and of 25⅝ per cent. upon those made thereafter.[1]

Ricardo in reply expressed disagreement with the necessity of adopting so violent a remedy. Such a measure might be beneficial to one class at the expense of another, yet it would afford very little relief to the country, and would be a precedent of a most alarming and dangerous nature. There had been both a fall in the value of the precious metals and a rise in the value of paper, but it was surely impracticable to legislate for every alteration in the value of currency. The existing distress arose in large part from a fall in the value of raw produce, totally independent of any variation in the value of money. It was confined to raw produce alone, and was temporary in duration and limited in effect.[2]

Apparently stimulated by the criticism, McCulloch expanded his pamphlet of fifty-three pages into an octavo volume of some two hundred pages, and sent a copy with an accompanying letter to Ricardo in the closing months of 1816.[3] The views of the larger work were described in the Prefatory Note as "fundamentally the same" as those contained in the earlier pamphlet, the writer endeavoring to prove that "a great portion of the paper

[1] *Letters of Ricardo to McCulloch*, p. 1.

[2] *Ibid.*, p. 2.

[3] *Ibid.*, pp. 3-9. As there stated, a tell-tale footnote referring to this volume, and contained in each of the three editions of the *Principles*, was coolly omitted by McCulloch from his edition of Ricardo's *Works*.

lent to Government during the late war was *depreciated*, and that if the stockholders are now paid the same nominal sums they lent, with *undepreciated* paper, they will get an undue advantage at the expense and ruin of the productive classes." McCulloch accordingly advocated the propriety of repealing the Restriction Act and of obliging the Bank to resume cash payments, but urged the inexpediency of such a measure unless accompanied by a reduction of the interest of the national debt, to counteract the effects of the bank restriction and of the corn laws.

Ricardo's response was lengthy and detailed; but the general tenor of his dissent was, if anything, more pronounced. He pointed out that McCulloch's proposal was based upon the assumption that neither gold nor silver was the standard by which bank notes should be regulated, but wheat; and, if adopted, the dividend on the national debt must be readjusted by the price of wheat every year or every ten years. Then, pressing his analysis, Ricardo summed up: "Your system proceeds upon the supposition that the price of corn regulates the price of all other things, and that when corn rises or falls, commodities also rise or fall,—but this I hold to be an erroneous system, although you have great authorities in your favor, no less than Adam Smith, Mr. Malthus, and M. Say."[1]

In how far Ricardo had at this later time of writing already reached the conclusion that a rise in the price of corn and in the rate of wages was not necessarily accompanied by a rise in general prices cannot be determined. It seems, however, reasonably clear that the discussion with McCulloch, centring as it did about a point on which Ricardo's views were most pronounced, should again have convinced him of the importance of completely refuting the fundamental assumption upon which McCulloch's proposal rested,—that general prices were regulated by the price of corn or the rate of wages.

[1] *Letters of Ricardo to McCulloch*, p. 6.

(*c*) A final impulse to disprove the proposition that lower wages were the cause of a fall in prices came to Ricardo from a third direction. General apprehension was felt throughout the country that the removal of restrictions on the importation of grain would be followed by a disastrous fall in general prices. Thus in the *Grounds of an Opinion on the Policy of Restricting the Importation of Foreign Corn* (1815) Malthus called attention to the "considerable check to industry" which the fall in general prices incident to the return to specie payments must occasion, and then cautioned, "it certainly does not seem a well-chosen time for the legislature to occasion another fall still greater, by departing at once from a system of restrictions."[1] Similarly, in another passage, Malthus pointed out how the great majority of "the class of persons living on the profits of stock" will in such event "feel very widely and severely the diminution of their nominal capital by the fall of prices."[2] So wide-spread was this impression and so animated the discussion that it excited that, writing in 1824, McCulloch could say, "the discussions respecting the policy of restrictions on the corn trade, and the causes of the heavy fall of prices which took place subsequently to the late peace, by inciting some of the ablest men that this country has ever produced to investigate the laws regulating the price of raw produce, the rent of land, and the rate of profit, have elicited many most important and universally applicable principles."[3]

On the one hand believing firmly, as he did, in the desirability of free trade in corn, and on the other hand recognizing the serious effect of falling prices, it was inevitable that Ricardo should have undertaken to prove that there was no necessary connection between the two phenomena.

[1] *Grounds of an Opinion*, pp. 9, 10. [2] *Ibid.*, p. 32.

[3] *A Discourse on the Rise, Progress, Peculiar Objects, and Importance of Political Economy* (1824), pp. 64, 65.

Thus impelled from three distinct quarters, it is not surprising that an urgent concern of Ricardo from the publication of the *Essay on the Influence of a Low Price of Corn* in 1815 to the appearance of the *Principles* in 1817 should have been disproof of the dictum that high wages necessarily meant high prices.

But no principle in the then existing body of economic thought was more firmly intrenched than this 'received doctrine'[1] which Ricardo proposed to assail; while the theory which he urged in substitution could at best be described as possessing "the disadvantage of novelty" and opposed by "writers of distinguished and deserved reputation."[2]

The whole trend of Adam Smith's reasoning had been to prove that a rise in the price of corn is immediately followed by a proportionate rise in the price of labor and of all other commodities.[3] Malthus had early declared that "the money price of corn, in a particular country, is undoubtedly by far the most-powerful ingredient in regulating the price of labour, and of all other commodities," even though "it is not the sole ingredient."[4] Say had asserted, "Si le prix du blé augmente, il [un chef d'entreprise, fermier, manufacturier ou négociant] est obligé

[1] Cf. *Principles* (1817), p. 39.

[2] *Ibid.* (1817), p. 42. McCulloch declared, "Nothing in the whole science of political economy was reckoned better established, than that a rise or a fall of the rate of wages was attended by a proportionable increase or diminution of the price of commodities." *Edinburgh Review*, June, 1818, p. 68.

[3] *Wealth of Nations*, Book IV. chap. v. (ed. Rogers, vol. ii. p. 84). *Cf.* Malthus, *Observations on the Effects of the Corn Laws* (3d edition, 1815), p. 11.

[4] *An Essay on the Principle of Population* (2d edition, 1803), p. 458. Similarly, in the *Observations on the Effects of the Corn Laws*, Malthus stated (p. 11), "The rise in the price of corn would have been immediately followed by a proportionate rise in the price of labour, and of all other commodities." It is true that in the same tract Malthus added (p. 15), "Nothing then can be more evident both from theory and experience, than that the price of corn does not immediately and generally regulate the prices of labour and all other commodities"; but it is very clear that Malthus is here speaking of the immediate and invariable effect, and not of the ultimate and general tendency, and that his belief was that general prices ordinarily rose in consequence of a rise in wages, even though not in exact proportion to a rise in the price of corn.

d'augmenter, dans la même proportion, le prix de ses produits."[1] Torrens had shown in detail that "A rise in the price of corn raises the price of labour, and the rise in labour is communicated to all commodities, both those which it immediately produces, and those to which these are employed as the equivalents."[2] McCulloch, as we have seen, was so firmly convinced that the price of corn regulates the price of all other things, and that, when corn rises or falls, commodities also rise or fall, that he based upon it his proposal to scale down the interest on the national debt, and had invited Ricardo's assent thereto. Even Ricardo himself had in 1814 written to Malthus that "the prices of all commodities must increase if the price of corn be increased,"[3] and a little later had referred to "the increased value to which all goods would rise in consequence of the rise of the wages of labour."[4]

By the beginning of 1816 we may conceive Ricardo as fully realizing the importance of the particular point at issue, and as bringing to the task of doctrinal readjustment the best thought of which he was capable. With characteristic profundity he seems to have realized that the sure way to this result was by re-analysis of the theory of value, and to a re-examination of this theory he proceeded to devote himself.

In February, 1816, he wrote to Malthus: "I have not thought much on our old subject; my difficulty is in so presenting it to the minds of others as to make them fall into the same chain of thinking as myself. If I could overcome the obstacles in the way of giving a clear insight into the original law of relative or exchangeable value, I should have gained half the battle."[5] By Octo-

[1] *Traité d'économie politique* (1803), tome 1, p. 294. In 1819 Ricardo could still speak of "M. Say being impressed with the opinion that the price of commodities is regulated by the price of labour." *Principles* (1819), p. 57, note.

[2] *An Essay on the External Corn Trade* (1815), p. 88.

[3] *Letters of Ricardo to Malthus*, p. 37.

[4] *Ibid.*, p. 39.

[5] *Ibid.*, p. 111.

ber of the same year (1816) definite progress had been made: "I have been very much impeded by the question of price and value, my former ideas on those points not being correct. My present view may be equally faulty, for it leads to conclusions at variance with all my preconceived opinions. I shall continue to work, if only for my own satisfaction, till I have given my theory a consistent form."[1]

The "consistent form" was attained in the first edition of the *Principles*, published in the spring of 1817.[2] The keynote of the initial chapter "On Value" was, as has already been said, far less any explicit statement or detailed exposition of the general theory of value than—going even beyond what was required—demonstration of "the compatibility of a rise of wages, with a fall of prices."[3]

Ricardo's starting-point was the familiar postulate that, as long as the relative values of commodities were measured by "embodied labour," only an increase in the amount of labor necessary to produce them could augment their value, and only a decrease would lower it. A general rise or fall in wages caused no change in prices. If "embodied labour" could thus be established as a universal measure of value, Ricardo's purpose, to prove that prices did not necessarily rise or fall as wages rose or fall, was attained.

But Adam Smith, "and with him"—added McCulloch—"every other political economist down to Mr. Ricardo,"[4] had asserted that the circumstances which determined relative values "in a rude state of society"—namely, "embodied labour"—were altered when capital and land fig-

[1] *Letters of Ricardo to Malthus*, p. 120.

[2] It was, doubtless, consciousness of his own mental experience that inspired the statement, in an early paragraph (p. 5), "from no source do so many errors, and so much difference of opinion in that science [political economy] proceed, as from the vague ideas, which are attached to the word value."

[3] *Principles* (1817), p. 42.

[4] *Edinburgh Review* (June, 1818), pp. 63, 64.

ured in economic production. Thereafter relative values were no longer measured solely by "embodied labour." Profits and rent entered as component parts into price, and the real prices of commodities were increased or diminished by every corresponding change in the ordinary rate of profits, the rate of wages and the rent of land.

We have seen that dissent from Adam Smith's abandonment of a "philosophical" for an "empirical" measure of value was a characteristic of the first phase of Ricardo's treatment of value. But this was, at best, the desire of a rigidly logical mind to rectify what appeared to be an illogical and unwarranted lapse. With the controversies of 1815–16 a much greater stake became the issue. It required no profound analysis to make it clear that, if the use of capital and land affected relative values in the manner Adam Smith and his successors had described, then Ricardo's several contentions were without theoretical warrant. Naturally enough, therefore, the formal purpose of the chapter "On Value" in the *Principles* became "to determine how far the effects which are avowedly produced on the exchangeable value of commodities, by the comparative quantity of labour bestowed on their production, are modified or altered by the accumulation of capital and the payment of rent."[1]

Of the two circumstances, the effect of rent payment received but brief attention, and that only, it may be suspected, to provide some logical introduction for the following chapter "On Rent."[1] Whatever further significance it possessed lay in the opportunity it afforded Ricardo to broaden the principle of "embodied labour" as a measure of value, so as to refer to that portion of the supply produced under the most favorable circumstances. This interval once bridged, he easily dismissed the matter.[2]

[1] *Principles* (1817), p. 16.

[2] "Adam Smith, therefore, cannot be correct in supposing that the original rule which regulated the exchangeable value of commodities, namely the

The relation of profits to the law of value was Ricardo's real concern. Two commodities respectively produced by different amounts of labor conjoined with identical amounts of capital exchanged—like commodities produced by labor alone—in proportion to "embodied labour." Even if the capitals engaged were different in amount, but identical in durability and in apportionment between fixed and circulating capital, the two commodities would exchange in proportion to the total quantity of labor respectively necessary to manufacture them and bring them to market, including in the term "total quantity" both the labor necessary to the manufacture of the commodity itself and that necessary to the formation of the capital by the aid of which it was produced. No alteration in the wages of labor nor in the profits of capital could effect any alteration in the relative value of such commodities. Nor, since the money in which they were valued was by supposition of an invariable value, could there be any alteration in the prices of such commodities.

But the situation was otherwise, if the several commodities were produced with the aid of different proportions of fixed and circulating capital, or if the quotas of fixed capitals so employed were of different durability. In proportion, Ricardo explained, as circulating capital preponderated in a manufacture or in proportion to the less durability of its fixed capital and its approach to the nature of circulating capital, any increase in wages resulted in a rise in the value of such commodities relative to the value of other commodities produced with the aid of less circulat-

comparative quantity of labour by which they were produced, can be at all altered by the appropriation of land and the payment of rent. Raw material enters into the composition of most commodities, but the value of that raw material as well as corn, is regulated by the productiveness of the portion last employed on the land, and paying no rent." *Principles* (1817), p. 67. In this particular Professor Gonner's interpretation (Introductory Essay, p. xxxiii, to his edition of Ricardo's *Principles*) is, I think, more accurate than Professor Patten's, "The Interpretation of Ricardo," in *Quarterly Journal of Economics*, April, 1893.

ing capital or more durable fixed capital. The relative values and, assuming an invariable money standard, the prices of all such commodities were inversely affected by every alteration in wages, and directly by every alteration in profits.

The phenomena introduced into exchange relations by the employment of capitals of unlike quality—responsible for the logical break in Adam Smith's treatment of value, and glossed over, although not by any means neglected, in the first phase of Ricardo's thought—were thus clearly recognized by Ricardo, in his second phase, as exceptions to the universal applicability and rigid accuracy of "embodied labour" as a measure of value.

That this qualification should have been explicitly developed and so cheerfully acquiesced in by Ricardo was due to the fact that it afforded, if anything, superabundant proof of the particular doctrine which he was seeking primarily to establish: the absence of direct variation between wages and values. In so far as "embodied labour" prevailed as a measure of value,—money being supposed, as throughout, to be of an invariable value—a rise in wages obviously involved no increase in values or prices. But, in so far as the employment of capitals of different quality modified the applicability of "embodied labour" as a unit of value, a rise in wages resulted in an actual fall in values and prices. Ricardo was, above all things, fond of a paradox-like dictum; and the close reader will detect almost a note of elation in the closing paragraph of his chapter "On Value": "It appears, too, that commodities may be lowered in value in consequence of a real rise of wages; but they never can be raised from that cause. On the other hand, they may rise from a fall of wages, as they then lose the peculiar advantage of production, which wages afforded them."[1]

[1] *Principles* (1817), p. 48.

III.

Ricardo's *Principles of Political Economy and Taxation* was published in the spring of 1817. We have seen that the treatment of value therein contained was designed less as an independent exposition than as a warrant for the proposition that higher wages do not necessarily mean higher prices. But, just as in the case of Malthus's first statement of "the principle of population," it was less the conclusion than the argument which was assailed. Ricardo found himself called upon not to establish any such novel proposition as that prices sometimes fell as wages rose, but more fundamentally to vindicate "embodied labour" as the soundest theoretical and the best practical measure of value.

This controversy, which constitutes the third phase of Ricardo's theory of value, appears to have begun with the appearance of McCulloch's highly laudatory notice of Ricardo's book in the *Edinburgh Review* for June, 1818. Six months earlier McCulloch, writing in the *Scotsman*, had defended certain of Ricardo's doctrines from a violent attack in the *British Review*.[1] But the ampler space of the quarterly first enabled him to present "an accurate exposition of the nature, as well of those general principles which Mr. Ricardo has been the first to ascertain, as of those which he has adopted from late writers, and combined with the others into one harmonious, consistent, and beautiful system."[2] Disproportionate in plan, marred by occasional inaccuracy and artificial simplicity, the review was nevertheless characterized by all of the intelligibleness and definiteness of McCulloch's expository writing. It is still to be read with profit by the troubled student of the Ricardian economics, while for the period in which and

[1] *Letters of Ricardo to Malthus*, pp. 145, 146.

[2] *Edinburgh Review*, June, 1818, p. 87.

the circles for whom it was written it was nothing short of a boon. Ricardo's gratification was pronounced. "My own doctrines"—he wrote in acknowledgment to McCulloch—"appear doubly convincing as explained by your able pen, and I have already heard in this retreat [Gatcomb Park] that those who could not understand *me*, most clearly comprehended *you*."[1] Even James Mill regarded it as "a masterly essay on the science, [and one that] will very much assist to disseminate correct views on a very intricate part of it."[2]

The theory of value and the use of "embodied labour" as its measure figured as the starting-point of McCulloch's exposition. Thereafter the propositions that the accumulation of capital and the payment of rent have no effect whatever in increasing the real price of commodities, and that a rise of wages is never followed by an increase of prices, were developed and stated with a precise absoluteness that could not fail to challenge rejoinder from those who were already on the verge of dissent.

The first serious protest came from Torrens in his "Strictures on Mr. Ricardo's Doctrine respecting Exchangeable Value," in the *Edinburgh Magazine and Literary Miscellany* of October, 1818. Some time before, Ricardo and Torrens had had "a long conversation on this question, without convincing each other";[3] but the public criticism clarified the issue, and compelled attention.

Adam Smith had been careful, Torrens stated, to limit the principle that the quantity of labor measures value to the first and rude state of society; and Ricardo, in going further, had gone wrong. Ricardo admitted that the principle which he had asserted would not hold of capitals possessing unequal degrees of durability, but said

[1] *Letters of Ricardo to McCulloch*, p. 10. [2] *Ibid.*, p. 11.

[3] *Letters of Ricardo to McCulloch*, p. 14. For the consequence of the discussion, *cf.* p. 480 below. In another place the present writer hopes to consider the doctrinal relations in general of Ricardo and Torrens.

they were exceptional cases. They were not the exceptional, but the common cases, replied Torrens, and therefore Ricardo's principles were entirely subverted by them. Even when the capitals possessed equal durability, the labor which they put in motion might be different and unequal; but competition would still bring the value of the products to the same point. Hence, although equal values no doubt emerged when equal capitals set equal quantities of labor in motion, there need be no necessary connection between the two circumstances, and the values might be equal in quite different cases also. It was not, therefore, the quantity of labor that determined exchangeable value; and Ricardo had mistaken "an accidental coincidence for a necessary connexion." The writer summed up: "Whenever capitals consist of different proportions of raw materials and wages, whenever the rate of wages happens to go higher in one business than in another, whenever capitals are of different degrees of durability, and whenever being of equal durability, the expenditure for wages is different, the value of the products will not be in proportion to the quantity of labour employed on them." [1]

McCulloch promptly supplemented his service as expositor by activity as champion.[2] In the very next issue of the same magazine he undertook to explain that under the term "labour" Ricardo included not only the labor employed on the capital after its accumulation, but the labor employed in actually accumulating capital, "the labour expended in forming the capital." In short, "What is capital but accumulated labour?" [3]

But McCulloch's explanation was much too limited and

[1] Cf. *Letters of Ricardo to McCulloch*, p. 16.

[2] "Torrens I understand is to attack my doctrine of value in the next number of the *Edinburgh Magazine*, and in the number following McCulloch is to defend it. It is a friendly contest. These gentlemen have lately met at Edinburgh." (*Letters of Ricardo to Trower*, p. 66.)

[3] Cf. *Letters of Ricardo to McCulloch*, p. 16.

unreal to be entirely acceptable to Ricardo. Moreover, Torrens's criticisms were supplemented by similar expressions from other quarters. As early as September, 1817, Malthus had given Ricardo's work a second careful perusal, and had found the measure of value—in Ricardo's phrase—one of "a very few important points on which we materially differ," and had won from him the free admission that the proposed theory of value did not hold good in different countries when profits were different.[1] Similarly, some months later, the outcome of discussions between Lord King, Wishaw, and Malthus, was recorded by Ricardo as agreement that "the measure of value is not what I have represented it to be."[2]

It is likely that such criticisms strengthened the conviction, present to some extent from the first in Ricardo's mind, that the claim of "embodied labour" to serve as a measure of value must be relative rather than absolute excellence. The demands of his publisher for a second edition of the *Principles of Political Economy and Taxation* opportunely permitted some formal expression to this belief; and, when the book actually appeared early in 1819, the initial chapter "On Value" contained textual changes which, although not vital,[3] may, in the light of what had gone before, be regarded as highly significant. The formal break marking the limit of the first statement of the theory of value[4] had disappeared. The text of the chapter was divided into five sections with italicized summary headings, which, read in sequence, clearly suggest the passing of the prime purpose of the chapter from demonstration of the

[1] *Letters of Ricardo to Malthus*, p. 139.

[2] *Ibid.*, p. 148. It is to be noted, however, that the point of issue seems to have been not "the measure of value" in the limited sense in which it was speedily coming to be used, but the larger question as to whether natural as well as market values were determined by demand and supply.

[3] The edition "has nothing new in it, as I have not had the courage to recast it," wrote Ricardo to Say on January 11, 1820. Cf. *Letters of Ricardo to Malthus*, p. 166.

[4] See note 2, p. 458, before.

proposition that higher wages do not necessarily mean higher prices to a more accurately qualified statement of the practicability of "embodied labour" as a measure of value. Careful examination of the limited number of changes introduced in the text of the chapter itself confirms this impression, and reveals a visible effort to make the chapter turn thenceforth upon the measure of value rather than upon correlated dicta.[1]

It is also interesting to notice that, in direct consequence of Torrens's criticism,[2] the amended chapter recognized a further exception to the general rule of "embodied labour" as a measure of value, in addition to the two cases noted in the first edition, namely: (*a*) if the several commodities were produced with the aid of different proportions of fixed and circulating capital; and (*b*) if the quotas of fixed capitals so employed were of different durability. This third exceptional circumstance was the fact that the circulating capitals might be of unequal durability, that is to say, "the circulating capital may circulate, or be returned to its employer, in very unequal times."[3] In such a condition, as where one manufacturer could bring the commodity he produced to market in less than one year, while another could bring his there in three months, the commodity of the first would fall in relative value to the second with every rise of wages and fall of profits.[4]

Ricardo complained to McCulloch, apropos of Torrens's criticism, that he had from the first distinctly stated that value was not regulated solely by quantity of labor, when capitals of unequal durability were employed in produc-

[1] Thus see the last paragraph of page 33 of the first edition, replaced by the last paragraph of page 31 of the second edition; the last paragraph of page 41 of the first edition, replaced by the last paragraph of page 39 of the second edition; and, most noteworthy, the three concluding paragraphs of pages 47–48 of the first edition, reduced by compression and omission to the less prominently placed paragraphs terminating Section V. (pages 39–40 of the second edition).

[2] *Letters of Ricardo to McCulloch*, p. 14.

[3] *Principles* (1819), p. 21.

[4] *Ibid.*, p. 36.

tion.[1] But, whatever Ricardo's intention may have been, and whether in consequence of Torrens's criticisms or for other reasons, certainly, as far as formal expression is concerned, the second edition of the *Principles* showed an appreciable increase of reserve in the advocacy of "embodied labour" as a universal measure of value.[2]

It is likely that Torrens made a further contribution to the discussion, possibly a rejoinder to McCulloch's reply, and submitted copies thereof to McCulloch and to Ricardo.[3] Of its nature we have no certain knowledge. But Ricardo's comment thereon has come to us, and is further noteworthy evidence of the mental development which the writer was undergoing: "I am more convinced than ever that the great regulator of value is the quantity of labour required to produce the commodity valued. There are many modifications which must be admitted into this doctrine, from the circumstance of the unequal times that commodities require to be brought to market, but this does not invalidate the doctrine itself. I am not satisfied with the explanation which I have given of the principles which regulate value. I wish a more able pen would undertake it. The fault is not in the adequacy of the doctrine to account for all difficulties, but in the adequacy of him who has attempted to explain it."[4]

In the early spring of 1820 appeared Malthus's *Principles of Political Economy*. An entire section (chap. ii., section iv.) was devoted to a vigorous and effective criticism of the adequacy "Of the Labour which a Commodity has cost, considered as a Measure of Exchangeable Value." Even more clearly than Torrens, Malthus emphasized the

[1] *Letters of Ricardo to McCulloch*, p. 14.

[2] See, for example, *Principles of Political Economy and Taxation* (1819), pp. 39, 40.

[3] *Letters of Ricardo to McCulloch*, p. 47. As there suggested, "the paper" may have been Torrens's "Comparative Estimate"; but, on the whole, this seems less probable.

[4] *Letters of Ricardo to McCulloch*, pp. 47, 48 (December 18, 1819).

impracticability of the labor measure in the case of commodities produced by different proportions of fixed and circulating capital or by identical amounts of capital used for unequal periods of time. To these admitted exceptions to Ricardo's measure he added three new categories, arising respectively from (*a*) "the quantity of foreign commodities used in manufactures," (*b*) "the acknowledged effects of taxation," and (*c*) "the almost universal prevalence of rent in the actual state of all improved countries."[1] Malthus accordingly reached the definite conclusion that the quantity of labor which a commodity has cost in its production is neither a correct measure of relative value at the same time and at the same place nor a measure of real value in exchange in different countries and at different periods.[2]

Had Malthus, like Torrens, stopped with negative criticism, his position would have been secure. But the positive measure proposed by him in substitution—"a mean between corn and labour"—was as empirical as it was bizarre, and served merely to weaken his prime attack.

No less promptly than upon the occasion of Torrens's criticisms did McCulloch enter the lists in defence of Ricardo's doctrine against Malthus's attack, this time in the columns of the *Scotsman*. With the general tenor of the vindication Ricardo appears to have been content. "You have with your usual ability"—he wrote in acknowledgment—"met Mr. Malthus on what I consider his strongest ground," and then, in pleased acceptance of discipleship, "I assure you that I am highly gratified in having succeeded so well in my imperfect statements, as to engage you in their defence, for I should have no chance of procuring their admission into other people's minds, without your powerful assistance."[3]

But Ricardo was his own severest critic; and, however

[1] *Principles of Political Economy*, p. 104. [2] *Ibid.*, p. 108.
[3] *Letters of Ricardo to McCulloch*, p. 63.

satisfactorily McCulloch's formalism might explain away the specific objections of commentators, it failed to restore tranquillity to the author's mind. The cases which had before been recognized as "exceptional" now began to take on co-ordinate importance; and, writing to McCulloch in May, 1820, Ricardo declared: "After the best consideration that I can give to the subject, I think that there are two causes which occasion variations in the relative value of commodities: 1st, the relative quantity of labour required to produce them; 2nd, the relative times that must elapse before the result of such labour can be brought to market. All the questions of fixed capital come under the second rule, which I will endeavour to explain if you should wish it."[1]

This first explicit recognition of the co-ordinate influence of production-time in determining relative value—destined to remain thereafter an unsurmountable barrier in Ricardo's mind to the universal validity of the labor measure—made McCulloch fairly "tremble for the ark of his covenant," and we may well conceive the troubled inquiry which came from Edinburgh to London. Ricardo responded with a clear exposition of "the effects which the relative times before commodities can be brought to market have on their prices, or rather on their relative value."[2] The particular point at issue was the impracticability of Malthus's proposed measure of value rather than the entire accuracy of Ricardo's. Having expressed himself in no uncertain tone upon this matter, Ricardo added with characteristic frankness: "It must be confessed that this subject of value is encompassed with difficulties. I shall be very glad if you succeed in unravelling them, and establish for us a measure of value which shall not be liable to the objections which have been brought against all those hitherto proposed. I sometimes think that if I

[1] *Letters of Ricardo to McCulloch*, p. 65. [2] *Ibid.*, p. 69.

were to write the chapter on value again which is my book, I should acknowledge that the relative value of commodities was regulated by two causes instead of by one, namely, by the relative quantity of labour necessary to produce the commodities in question, and by the rate of profit for the time that the capital remained dormant, and until the commodities were brought to market. Perhaps, I should find the difficulties nearly as great in this view of the subject as in that which I have adopted."[1]

It is likely that in the detailed *Notes on Malthus,* written in the autumn of 1820, Ricardo fulfilled something of the intention herein expressed. But, yielding to the counsel of McCulloch and Mill to avoid giving his treatise too controversial a character, this commentary was withheld from publication, and the missing manuscript still remains a conspicuous desideratum in the study of Ricardo's mental history.[2]

By the end of 1820, however, Murray, the publisher, had again begun to clamor for a new edition of the *Principles of Political Economy and Taxation;*[3] and Ricardo was enabled to realize in some degree his definitely conceived purpose. The urgency of the printer (the chapter "On Value" forming the first sheets), Ricardo's unwillingness to enlarge the book greatly or to increase its controversial elements,[4] uncertainty as to the future of the *Notes on Malthus,* and, most of all, the actual existence of a chapter "On Value," resulted in "a few additions to the first chapter," designed "to explain more fully than in the last [edition] my opinion on the difficult subject of VALUE,"[5] instead of the thoroughgoing reconstruction

[1] *Letters of Ricardo to McCulloch,* pp. 71, 72.

[2] The *Notes* would have occupied about 150 printed pages, and would probably have appeared as an appendix to the third edition of the *Principles.* Cf. *Letters of Ricardo to Trower,* p. 141.

[3] *Letters of Ricardo to McCulloch,* p. 87.

[4] *Letters of Ricardo to Malthus,* p. 172.

[5] "Advertisement to the Third Edition" of the *Principles,* ix.

which might have resulted "if I were to write the chapter on value again."[1]

But, withal, the chapter "On Value" in the *Principles* of 1821 is in content and tendency very different from that in the original edition of 1817 and a conspicuous though logical advance over that in the edition of 1819. Ricardo's purpose, first and foremost, was no longer to refute the proposition that higher wages were the cause of higher prices, but to show that embodied labor was the most practicable measure of value and that gold was its most serviceable standard expression. The "received doctrines" of Adam Smith and succeeding writers, that a rise in the price of labor would be followed by a rise in the price of all commodities, was disproved by inference rather than in detail; and the compatibility of higher wages and lower prices was relegated to incidental statement.[2] On the other hand, the exceptions to the universal applicability of "embodied labour" as a measure of value were no longer glossed over as negligible, but described in sequence. Alterations in the rate of profits were recognized as co-ordinate in kind, though not in degree, with "embodied labour" as a determinant of value. Ricardo asserted with a new distinctness that "it would be wrong wholly to omit the consideration of the effect produced" thereby; and if, he added, "it would be equally incorrect to attach much importance to it,"[3] it was for the reason that "this cause of the variation of commodities is comparatively slight in its effects."[4] Thenceforth the prominence of "embodied labour" in Ricardo's treatment of value, to the relative neglect of other influences, was the result of deliberate convention rather than of culpable neglect.[5]

1 *Letters of Ricardo to McCulloch*, p. 71.

2 *Principles* (1821), p. 45. 3 *Ibid.* (1821), p. 33. 4 *Ibid.*, p. 32.

5 "in the subsequent part of this work, though I shall occasionally refer to this cause of variation [the rate of profits], I shall consider all the great varia-

To both James Mill and McCulloch the modified views of Ricardo appear to have given concern. In the spring of 1821, hard upon the heels of the third edition of Ricardo's *Principles*, appeared Mill's *Elements of Political Economy*, designed, as Ricardo wrote to McCulloch, "to steer clear if possible of the difficult word value."[1] But it was the difficulties of the concept rather than the concept itself which were avoided; for Mill restated the theory of a "labour embodied" measure with absolute, uncompromising rigidity. Beyond admitting that, "In estimating equal quantities of labour, an allowance would, of course, be included for different degrees of hardness and skill,"[2] he recognized none of the exceptions to the measure which Ricardo described. Capital was merely "*hoarded* labour, that which has been the result of former labour, and either is applied in aid of the immediate labour, or is the subject-matter upon which it is bestowed."[3] Three years later Mill took notice of the time element in value measurement, only to deny vigorously its influence.[4] But in 1821 he could sum up decisively, "It thus appears, by the clearest evidence, that quantity of labour, in the last resort, determines the proportion in which commodities exchange for one another."[5]

Some intimation has already been given of McCulloch's anxiety.[6] The discussion on value in Ricardo's *Notes on Malthus* appears to have caused further concern,[7] and Ricardo himself sought by preparatory explanation to soften the blow which he knew would fall with the appear-

tions which take place in the relative value of commodities to be produced by the greater or less quantity of labour which may be required from time to time to produce them." *Principles* (1821), pp. 33-34.

1 *Letters of Ricardo to McCulloch*, p. 92.

2 *Elements of Political Economy* (1821), p. 72.

3 *Ibid.*, p. 75.

4 *Ibid.* (2d edition, 1824), p. 95 *et seq.*

5 *Ibid.* (1821), p. 74.

6 See p. 483, above.

7 *Letters of Ricardo to McCulloch*, p. 94

ance of the third edition of the *Principles*.[1] But McCulloch, like Mill, was unyielding, and continued to maintain in his private classes and public lectures in Edinburgh a rigid labor measure.[2] Early in 1822 he submitted his manuscript notes to Ricardo;[3] and, if in the resultant criticism the issue was not emphasized, the difference was none the less clear and substantial.[4]

Parliamentary duties, corn-law agitation, fiscal discussions, and a Continental tour absorbed Ricardo's time and attention during 1822. But early in 1823, probably in consequence of the discussions, in Parliament and out, of the effects of the Bank's resumption of specie payments upon general prices, the subject of value again became of high theoretical interest to the little coterie of economists of which Ricardo had become an important member. At a meeting of the Political Economy Club on February 3, 1823, with Torrens in the chair and with Malthus, Ricardo, Tooke, Mill, and Mushet among those present, a subject of discussion (proposed by Torrens) was, "What are the circumstances which determine the exchangeable value of commodities?"[5] Two months later debate upon the same

[1] "I have made some alterations in the first chapter 'on value' which I fear from the remarks in your letter will not meet with your approbation. I wish I had sent you the chapter, as it is now printing with the other papers, that I might have profited by your opinion of it, before I had proceeded so far towards its publication. . . . I am not satisfied, as I have often told you, with the account I have given of value, because I do not know exactly where to fix my standard. . . . I have reflected so much upon it that I despair of becoming more enlightened upon it by my own unassisted efforts." *Letters of Ricardo to McCulloch*, pp. 94, 96.

[2] *Ibid.*, p. 118; *cf.* also McCulloch, *Discourse on the Rise, Progress, Peculiar Objects, and Importance of Political Economy* (Edinburgh, 1824), p. 66 *et seq.*

[3] *Letters of Ricardo to McCulloch*, pp. 128, 132.

[4] "You go a little farther than I go in estimating the value of commodities by the quantity of labour required to produce them. You appear to admit of no exception or qualification whatever, whereas I am always willing to allow that some of the variations in the relative value of commodities may be referred to causes distinct from the quantity of labour necessary to produce them. . . . To this second cause [variations in wages and profits] I do not attach near so much importance as Mr. Malthus and others, but I cannot wholly shut my eyes to it." *Ibid.*, pp. 131, 132.

[5] *Minutes and Proceedings, 1821–82*, vol. iv. p. 56. Senior was balloted for and elected a member of the club at this meeting.

topic was resumed;[1] and at a third meeting the related query, "Can there be an increase of Riches without an increase of Value?" was discussed.[2]

This theoretical debate was supplemented by the appearance early in 1823 of Blake's *Observations on the Expenditure of Government*[3] and Malthus's *Measure of Value*,[4] and a little later by Western's motion in the House of Commons for the appointment of a committee to inquire into the effects of resumption. In each case the questions involved were whether the alteration in prices was due to an appreciation of gold or to a depreciation of paper, and what standard measure afforded the best means of determining this fact.

Of the three circumstances, Malthus's tract came to Ricardo as the most direct challenge. Abandoning his earlier proposal of 1820 of a mean between corn and labor as a measure of value,[5] and more dissatisfied than ever with Ricardo's proposed measure, Malthus announced his definite adherence to the "labour commanded" theory of Adam Smith. He asserted that relative value was measured by the amount of "accumulated and immediate labour expended on the commodity, together with the ordinary profits estimated upon such advances."[6] But this composite "must necessarily be the same as the quantity of labour which they will command";[7] and, since the quantity of labor worked up in a commodity could not in many cases be practically ascertained, whereas the

[1] *Minutes and Proceedings, 1821–82*, vol. iv. p. 57. Sir Henry Parnell presided; and Tooke, Senior, Warburton, James Mill, Grote, Malthus, Ricardo, and J. S. Mill (as a visitor) were present.

[2] *Ibid.*, p. 59. McCulloch was present as a visitor. This was the last meeting held in Ricardo's lifetime; but the subject of value continued to engage the attention of the club for some time thereafter. *Cf.* note 5, p. 459, above.

[3] *Observations on the Effects Produced by the Expenditure of Government during the Restriction of Cash Payments* (London, 1823).

[4] *The Measure of Value Stated and Illustrated, with an Application of it to the Alterations in the Value of the English Currency since 1790* (London, 1823).

[5] *Measure of Value*, p. 23, note. [6] *Ibid.*, p. 14. [7] *Ibid.*, p. 16.

amount of labor which it would command was evident and palpable, the "commanded labour" theory was at once theoretically sound and practically serviceable.

The animated controversy which continued through the spring and summer of 1823 formed the final episode of Ricardo's scientific life. Long letters relating thereto passed between Ricardo and Malthus, and were summarized or actually transmitted with detailed commentaries to Trower and McCulloch. Mrs. Grote tells of dinners at "Threddle" where Mill, Ricardo, and McCulloch (then visiting London, and later Gatcomb Park) had interminable discussions upon the measure of value.[1] Similarly, Ricardo wrote to Trower that Warburton and Torrens—to say nothing, doubtless, of Blake and Tooke and other members of the group—had "their particular view" as to a proper measure of value.[2]

In so far as this final contribution of Ricardo to the value controversy possessed any distinctive characteristic, it was the prominence accorded gold as a practical rather than "embodied labour" as an ideal measure of value. This was in part a reflex of contemporary Parliamentary debate, in part a reaction from McCulloch's insistence upon "the mathematical accuracy"[3] of the labor measure. As against all of his adversaries, Ricardo continued to assert that an invariable measure of value was unobtainable, and that we can only make "the best choice amongst confessedly imperfect measures."[4] To McCulloch and Mill he made further answer that a rigid labor measure accounted for variations arising from more or less labor being required to produce commodities, but that it failed with respect to variations brought about by the use of varying proportions of labor and capital. "For these variations," he added, "there has never been, and I think never will be, any perfect measure of value."[5] To Malthus

[1] Bain, *James Mill*, p. 208. [2] *Letters of Ricardo to Trower*, p. 206.
[3] *Letters of Ricardo to McCulloch*, p. 174. [4] *Ibid.*, p. 177. [5] *Ibid.*, p. 173.

he similarly replied that, inasmuch as the great mass of commodities awaiting exchange were produced by the union of labor and capital for a certain length of time rather than by either labor or capital alone, a measure of value such as money, compounded of two elements, wages and profits, was more serviceable for practical purposes than a measure representing wages alone, such as "embodied labour," or profits alone, such as old oak-trees or a pipe of old wine.[1]

IV.

It is thus possible to speak with propriety of the "development" of Ricardo's theory of value. Far from being the rigid and definitive exposition which his critics have represented, the concept was distinctly a doctrinal growth, reflecting in its course the characteristic phases of Ricardo's mental history. It is true that the central feature of the theory underwent evolution rather than radical change; but in point of approach, in relative emphasis, and in manner of statement the differences are so conspicuous that, taken in themselves, they perplex and bewilder even the most earnest student, and only when interpreted in the light of the successive conditions and influences which affected Ricardo's scientific life do they become clear and intelligible.

Starting from Adam Smith's exposition, Ricardo's first impulse was to supply the gaps and to perfect the logic of the traditional theory of value. But, before the occasion for written statement had arrived, the practical controversies associated with a debated corn-law policy had absorbed his attention; and the exposition of value which actually appeared was less an abstract contribution than a theoretical warrant for concrete proposals. But, as so often before and since in the history of scientific doctrines,

[1] *Letters of Ricardo to McCulloch*, p. 177.

it was the argument, not the conclusion, which was attacked; and thereafter theoretical interest and contemporary events combined to fix his attention upon a serviceable measure of value rather than upon its essential elements.

It is idle to conjecture to what extent Ricardo, had his life been spared a few years longer, would have penetrated further into the value maze. He had come to a full sense of its intricacy,[1] and had passed beyond the stage of disputation.[2] Certainly, he would never have remained long quiescent in doctrinal agnosticism. All that we know of his intellectual tenacity and his logical method suggest that he would have forged steadily ahead, ultimately to attain, if not the central truth, at least a station far in advance of his disciples and his critics, and not far removed from that which his most sympathetic interpreters have been inclined to accord him.

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[1] "I am however only labouring in my vocation, and trying to understand the most difficult question in Political Economy. All I have hitherto done is to convince myself more and more of the extreme difficulty of finding an unobjectionable measure of value." *Letters of Ricardo to McCulloch*, pp. 159, 160.

[2] "And now, my dear Malthus, I have done. Like other disputants, after much discussion we each retain our own opinions. These discussions, however, never influence our friendship; I should not like you more than I do if you agreed in opinion with me." *Letters of Ricardo to Malthus*, p. 240.

THE RIGHT TO LABOR.

In social life, men are aware of an evil long before they can define its causes or indicate its remedies. A correct diagnosis is a first step towards a cure. This confusion of thought overtakes us all, and especially the masses of men. In the darkness one may recognize the presence of an enemy, and yet, striking at random, may be injured by his own blows. The depressed classes confronted by difficulties too great for their strength, and finding the attitude of society towards them one of indifference and of hostility, may sullenly affirm, "The world owes me a living." The neglect and oppressions they suffer seem monstrous to them, and the claim they assert to be a real and urgent one. Yet they fail to understand its import, how the existing state has arisen, and where the obligation of redress attaches. The familiar phrase hints vaguely at the wrong, but may as easily become the occasion of still farther wrong as provide the needed remedy. The world owes them a living, but not in the form in which they fancy.

The relations of men to society are various; and, because of this diversity, each relation, looked at singly, may be more or less confounded with other relations. When society has occasion for service, men are in no way equally fitted to render it, and immediately there is occasion for selection. Society should have the best service, and those who can render it have a just precedence. At this point the doctrine of equality is without application, and choice takes its place.

When the ultimate units of society are under consideration, the relation is very different. Every man has large stakes in society,—stakes that constitute for him

his all. It is much simpler, and ultimately more just, to express these interests under their personal form, regarding each man as a unit, than it is to let in differences between man and man, to assign values incapable of determination and sure to become simply a measure of force. The predominant personal element is allowed to assert itself, as in co-operation or in democracy. The man is accepted as the political unit; and we assert an equality in civic relations which we have theoretical difficulties in expounding, but great practical ease in applying. No class can be excluded from judicial rights; and, if any class is excluded from political rights, it must be because these rights share also the nature of a service which all are not prepared to render. When inequality reaches these fundamental relations, those subject to it cease to be full constituents of society.

When we come to the depressed classes, the case is still different. Circumstances or native endowments or personal delinquencies have so wrought against them that they are not able to maintain an individual footing under equal civic privileges and common economic opportunities. Society is constantly called on to do something more for them, worsted in the battle of life, than for other classes,—to restore the equilibrium which is constantly slipping from them. If this is not done, the advantages which the more enterprising and able secure become permanent, and the paths of progress from below upward become increasingly difficult. At this point the assertion gains meaning,—"The world owes me a living." The fortunate ones have so stolen a march, have so won the inside track, that the equality of opportunity has been lost. New adjustments are to be made, suited to the actual balance of powers. To plead an equality which never did exist or which has quite passed away is to put off the poor with words,—words that have become stones,

not bread. When the man out of employment, and with no power to secure it, says, "The world owes me a living," he may mean, I am at liberty to prey upon society, since society preys upon me, or he may mean: it is the duty of society to readjust the terms of life in my favor, to make bearable the burden that I have to bear. By my very presence in the world I am a term in society, and must have a footing granted which I can hold. The ambiguity of the claim, "The world owes me a living," is a portion of its fascination. The claimant catches sight both of its admissibility and inadmissibility, of a right of concession and a hint of violence.

The well-to-do, in denying this plea, may be acting under the hard, arrogant temper, "My own is my own for all purposes"; or they may entertain the kinder feeling that the demand is made in a temper subversive of society. The two parties, if they are to find reconciliation, must meet each other under the idea that social duties are not exhausted by the notion of equality as once established, but that this equality must be renewed and cherished by many concessions not contained in the primitive compact. There is a sense in which every man can claim a living, a feasible way into life; and his own obligations take effect only in connection with a possible benefit of society to him. It is only at this point of concurrent social action that the two parties which have fallen into hostility can find reconciliation. Mutual rights and duties grow out of agreement.

A case similar to this, and with a like confusion of thought, has arisen in the industrial world under the assertion, "Every man has the right to labor." That rights of a special and indefeasible form attach to labor is destined to be a great economic and social disclosure. Contracts express the terms of reciprocal power on which men stand with each other. Mutual claims and conces-

sions are expressed in them. The frequency with which contracts are formed, their explicitness and binding power, indicate diffusion of rights and equality of privileges. A class that makes no contracts is either a ruling or a subject class. A contract stands for mutual power. The civil law accepts the enforcement of contracts as a primary duty.

Permanent and important relations between men are assumed by written contracts, and some of them by contracts which require public record. Verbal contracts indicate slighter and more transient connections,—connections with few reciprocal obligations. A verbal understanding indicates that the parties to it are acting under some general custom which needs no explanation, confers but few rights, and can readily be dissolved. Those whose entire lives rest on implied or verbal agreements lie, like empty bubbles, on the surface of industrial activity,—rise, disappear, and are replaced by a tide whose movements they in no way control. They do not enter into governing forces. Their services simply fall to them, and fall away from them, as occasion offers. Their rights are of the simplest character, and are incapable of enforcement beyond narrow limits.

The great mass of laborers have hitherto fallen below the region of contract. Their opportunities for labor have come with as little definite sequence, as little mastery over the conditions of life, as the foam that springs out of the sea and is gathered or scattered by the winds. If inventive power goes with labor, the workman may begin to make terms with his employer, or, if the service rendered is of a professional character, a tendency to establish periods of employment appears, and dismissal becomes less arbitrary. The great mass of workmen are left under verbal agreements of the simplest kind, and are constantly open to the vicissitudes of change. When we consider how large a portion of any industrial

community laborers constitute, how slight a control they exercise over the forms and degrees of industry, how weak a social element they are under existing methods, we cannot fail to see that a primary and essential constituent in the economic world is treated as if it were a negligible factor. Society cannot be broadly or deeply organized under such a system, nor can productive power approach its maximum. The prizes of life and the toils of life fall apart, and there is no free circulation of motives.

When a community clings to this state of things, it is accepting, under the blinding force of conventional sentiment, an unfortunate and transient relation as a permanent framework of order. An assertion of a right to labor indicates that some, at least, are beginning to feel the incongruity, the disproportion of power, between essential parts of society. Our own time has brought out this conflict of rights which lurks in the freedom of management and bondage of labor. It begins to be seen that sagacity and leadership can, advantageously, have no absolute authority conceded to them, any more than supreme rule can be granted to chiefs, kings, and emperors. The democratic idea comes to the surface once more; and we feel again, as we have felt before, that men must be allowed claims in connection with what they have to do. The slavery of an industrial world, ordered by a few in their own interest, becomes as real, and at times as severe, as enforced labor. The industrial world is making a stand against tyranny, talks about duties and rights, and struggles to define and defend mutual obligations.

In this phase of development we encounter, as elsewhere, profound difficulties. The power which falls to leadership, when leadership first arises, is always excessive, whether we are dealing with the political or the economic or the intellectual or the spiritual world. In all these directions it is a primary consideration to secure leadership.

Till this is attained, nothing effectual can be done. The moment, however, it appears, the second difficulty arises, —of putting upon it suitable limitations. The most controlling relation in the economic world is that between those who lead in industry and those who are led, between the employer and the employee. These two together are the active producing agents, and neither has power independently of the other. Management is impotent without labor, and labor is futile without management. An agreement between them by which concordant and concurrent action is secured lies at the foundation of universal and permanent prosperity. If a contract is in order, it is very much in order.

The reason why this field has been left so destitute of terms of agreement has been because the immediate advantages of management have been so superior to those of labor as to enable it easily to claim the foreground. There has not been sufficient reserved power in labor to force a contract. The employer is content to proceed without an agreement, as control is already in his hands; and the workman is pressed by so many necessities, so driven by competition, that he cannot stop to bargain about the future. Sufficient unto the day are the evils thereof. The obvious reason of this predominance of power resting with the employer is the scarcity of employers and the abundance of laborers. The numerical relation between the two parties is unfavorable to a discussion of terms, and tends to become more and more so. The employer must have labor, and the laborer must have employment; but the equality of the need is at once overshadowed by the fewness of those who appear on the one side and the number of those who offer themselves on the other side. The intrinsic equality of claims is lost sight of in the self-contained attitude of the one party and the urgent necessities of the other. Commer-

cial development rapidly increases this inequality. Management is constantly concentrated. Employers become fewer and fewer in reference to employees. Even without formal agreement, they adopt one policy in reference to labor, the policy of repression. In earlier periods, when the employers were more numerous, less separate from laborers, more distinct in methods and less frequent in consultation, the employee could more readily alter his engagements, and find refuge from the hard temper of one man in the easy ways of another. His individuality went for more, and personal ties retained some strength. Even then he was a dependent, but dependence counted for something. Now we have scarcely more than a sum in remainders, and a sum that is often thrust aside by an imperious temper and the feeling that no loss is so great as the loss of power. The workman thus has found himself more and more adrift, more and more subject to the accidents of production and the caprice of employers, because individually he could not command a contract, and he has not been accustomed to collective action. He has been as needful to the community as the manager, but he has had no way of making that need felt. The community had been gaining integration; but he had been left out as in a measure superfluous, with constant waste and injury. This is the fundamental fact in the labor question, the only one in connection with which the right to labor can be intelligently asserted. The right lies between employer and employee. The accidents which have obscured this right are to be forced back, and the mutual obligations are to be allowed to emerge. We have had extreme combination on the one side and but little combination on the other, till we have lost all sense of the real balance of claims between the two parties.

The laborer, acting alone, can offer no effectual resistance to the employer when he undertakes to force down

wages. If he refuses to accept lower pay, he is dismissed and another laborer is called out of the crowded market to take his place. The new man may be inferior, and probably is inferior, to the one he displaces. That is not material. He subserves the present purpose. Wages are reduced, and after a little the better workman will find his way back at the lower rates. The diligent, enterprising man does not settle wages, not even his own wages, but the class next inferior. This process is renewed as often as the employer thinks it worth while; and the laborer is kept in a dependent, timid attitude which incapacitates him to use even the power of resistance which still remains to him.

The social and economic movement is thus, as far as the workman is concerned, the exact reverse of what it should be. Inferior skill, inferior thrift, inferior productive temper, rule the market. The moment the laborer attempts to force an advance, the man below is called in, and the effort is made futile. To this retreat there is no limit but that of bare subsistence. The momentary equilibrium is not final. It may again be disturbed, and re-established at a lower point. This has led economists to say that there is no measure to the depression of wages, that they are constantly sinking to the line below which life is impossible. That they are not more rapidly pushed to this extreme is due to the good will and the inertia of the employer. Thus the workman, no matter what his personal quality, is without any secure footing. His prudence avails him nothing; and the price of his labor is determined by the class to which he belongs, not in anxious and thoughtful action, but in stolid contentment on the part of its most indifferent members. In England, where the system has been partially corrected, the industrious workman who lives beyond sixty-five is liable to come on the rates. This state of things is most distress-

ing in its effect on the laborer. What is its effect on the manager?

The manager has the most unrestrained control of business, with the least possible responsibility to the employee and to the community at large. If profits are abundant, he has no scruples about appropriating them, and is reluctant to raise wages. He is content that wages should remain subject to the economic law of supply and demand, scarcely raising the question whether the law is in suspension or in operation. The demand for labor is slow in taking effect. Time is consumed in transferring profits into capital, and capital into new plants. The present remainder of unemployed, or partially employed, labor must be reabsorbed before the demand, in an efficient form, reaches those already occupied; and, when it does arrive, there are many personal embarrassments in a change of employers. By the time all these delays are exhausted, a reaction is likely to set in, and the demand settle again to the old standard. A moderate tide rises and falls in the labor market, but its force is expended in floating about loose material.

Any pressure in profits, on the other hand, makes itself felt at once in wages. If competition is severe, if the wishes of the employer, eager for wealth, are not being met, he looks about for some reduction of expenses. The economy with which he is most familiar and which promises most immediate relief is a diminution of wages. This is the line of least resistance. In any other direction he encounters capitalists who are prepared for vigorous contention over the price of their products. The workman alone has no measure of price and no power to sustain the current price. Some one is always waiting to underbid him. Hence the employer proceeds to throw the disaster of failure on the workmen, regarding it as an expression of good will that he does not dismiss him alto-

gether. Under the system of uncombined labor each man drops helplessly into the position which falls to him. Resistance is reduced to its lowest terms. Both employer and employee look upon these fatalities as something unavoidable. Not only can the workman plead no rights, his mind comes to be destitute of the very notion of rights. This movement being regarded as inevitable, it ceases to be studied for the means of correction.

It is not strange that the employer, familiar with this method and this method only, should come to think of the business of the world as exclusively his own, and should avail himself at once of all its immunities and all its advantages. When wealth has been in the most rapid process of accumulation, management has been most cruel. The extreme toil of children and the degrading labor of women, in the early development of productive power, are proofs of this temper. Individual rights, and the rights of the race to strength and perpetuity, were trampled under foot. The same tendency, under similar conditions, is reasserting itself at the South. Management entering new territory, like the Sandwich Islands or the Philippines, is anxious to avail itself of some form of coolie labor. The gold region in South Africa is disturbed by the reluctance of labor to perform the tasks assigned it, and is anxious to secure some form of coercion. The condition of the laborer and his wishes hardly enter into the calculation.

Not far from Williamstown a village was suddenly built up around a new plant. The commodity produced fell shortly under the control of a trust, and the factory was discontinued. A heavy and irretrievable loss was left to fall on those who, trusting to the indication of capital, had built houses or shops or stores. The boat is capsized, the officers save themselves, and leave the crew and passengers to make what shift they can.

By the means of bankrupt laws the responsibility of management to the community has been still farther reduced, and a reckless temper given a free hand. The result is that the annual liabilities from failure vibrate about $250,000,000. We at times lay great stress on the losses by strikes, and certainly these losses indicate a great want of wisdom on our part; but the responsibility for them lies between the parties to them, according to their respective faults. They are not to be charged on labor exclusively, unless it has ceased to be a virtue to establish and maintain rights. In these struggles the most severe, indeed the only severe, suffering, no matter what may be the merits of the case, are sure to fall on the workmen. In the failures of management the losses are scattered widely through the community, and the manager may even escape with gains. We take but little account of these ever-returning evils of rash management, we are so familiar with them.

If we add to these failures the losses incident to financial crises, which have occurred with such regularity in the business world, and have been the product of the speculative and self-reliant temper; if we remember the disasters incident to an unsound currency, and anticipate the dispersion of industrial centres and the general decay of incentive which are sure to attend on the vigorous efforts of a few to govern the commercial world,—we shall see that the rule of business men has not been altogether successful, and that a wider concurrence of interests might have given us more complete and more uniform prosperity. It is plain that the results of undivided and irresponsible power in business have not been fortunate, whether we look at the restless, speculative, and unsympathetic temper of management, or at the disasters which it scatters in the community, or at the overtopping claims and oppressive wealth to which it gives rise in the form of trusts.

With workmen kept in a dependent position the transition is not far nor difficult to a neglect of all interests save those which the manager has under immediate consideration. Special protection, special franchises, a special control of the instruments of commerce, enhanced by extended combination, at length give a monopoly of advantages which threatens the overthrow of all equality of rights in the economic world. It has been justly said that the combination of workmen is the first line of defence against the march of a tyrannical few towards a commercial conquest of the world. We may well recognize the social value of this movement of workmen to establish for themselves an economic footing, and to secure a real partnership in the wealth-creating processes.

Here lies the bottom principle in the entire discussion. Shall society be organized under the leadership of a few, primarily for their own benefit, or shall it be deeply, increasingly, organized through its entire membership for the profiting of all? Is there any kingdom of heaven possible, or is there not? Does every movement in civilization issue in wider and wider spaces between those who rise to the top and those who sink to the bottom, while morality and religion are only spasmodic efforts to shake together oil and water that begin at once to separate again? Is democracy a mere cobweb that glitters in the morning light, but stays no man's steps? We have one answer for all these questions. The spiritual heavens have the same breadth of service as the physical heavens, that dissipate noxious vapors, that absorb moisture and return it as showers, that yield the elements of every form of life, that receive light and scatter it to the world's end, that are translucent with the revelation of the entire cosmos.

An essential step in the organic growth of the community is the combination of labor. Singly, the employee

can make no terms with the employer. He is easily pushed from the shore, like a spent swimmer. When workmen stand together, in recognition of the fact that labor is a primary constituent in all production, they have a position from which they can make a contract with capital in defence of mutual rights. The great advantage of capital at the present time gets expression in the ease with which it combines. A like facility of collective movement on the part of labor will restore the equilibrium between the formally opposed but fundamentally united parties in production. Claims, reasonable and capable of enforcement, will appear on the side of labor. The right to labor will become formulated, and recognized directions and limits of activity will take the place of the caprice of a few. Organic dependencies will be established, profitable to both parties and to the entire community.

The limit of business activity is bankruptcy: the limit of labor is bare subsistence. A minimum wage would arrest both forms of decay at an earlier stage. A minimum wage leaves the ordinary standards of life unassailed. The workman may as well stop while life is endurable as be compelled to stop when it has become unendurable. The recovery from the one position is effected more speedily and with less loss than from the other. Overproduction has gone farther, the price of commodities has fallen lower, when the downward movement has been left to complete itself at the expense of the laborer. The rallying process becomes painful and partial. The standard of life is reduced, and the workman lapses into stolidity, as one who bears burdens he cannot lighten. Civilization thus becomes a crushing weight. The working classes are fittingly spoken of as mudsills, since they are pressed deeper and deeper into the mire as the superincumbent mass increases.

But it will be thought we have not touched the real difficulty. The present untoward results are not voluntary, nor can any good-will much alter them. They are contained in social and economic laws. To struggle against these laws is futile. The primary source of the trouble is an overcrowded labor-market. Yet the weakness which is incident to numbers makes itself felt through separate action. Barbarians are easily defeated because they are not trained to act together. Let workmen take thoughtful and deliberate counsel, and the labor-market will take on a new appearance. It is not the mere fact of numbers which occasions the difficulty, any more than it is the swarm of savages that occasions the slaughter. England two centuries ago had but one-sixth of its present population, and hardly more than one-sixth of its present comforts. Ireland, with a declining population, has been easily outstripped by England, with an increasing population. We are still far off from the limits of the world's productive power. We are not hampered by these limits, but by the ill-advised, conflicting way in which we work within them. As long as we allow the disasters of our productive life to fall on one class, and its gains to accrue to another, we shall have extreme poverty; and extreme poverty begets and rebegets itself.

The heedless scramble of a few for a first position, by which many are thrown down and trampled under foot, is seen in the manner in which machinery has frequently been introduced. Machinery ultimately becomes a gain to all, but it also imposes immediate losses. These have been allowed to fall heavily upon the laborer, and have been ordered at times with the express intention of reducing wages. So also the accidents which inevitably accompany the use of machinery have been left as the inheritance of labor. They are properly the burden of the community. Those wounded in the industrial ranks

are entitled to as much consideration as those who have borne the brunt of battle. Why should the fatalities which attend on railroad labor rest so exclusively on the employee?

There are two opposite tendencies in society, an upward and a downward one: each perpetuates itself. The method with which we are most familiar is that of decay. We force down wages: we thereby limit consumption, and this reduces production. Even machinery, though it throws out labor, by increasing production reabsorbs it again. As long as production expands and the rewards of production multiply in the hands of workmen, we shall have growth, and a thoroughly self-sustaining growth. The methods, on the other hand, which reduce wages and enlarge profits work disastrously at both extremities. Productive consumption is decreased here, and wasteful consumption increased there. The community carries many who make no adequate return. Wise production has ample power, and ever-increasing power, to nourish itself.

There is sound philosophy in the workman's assertion: "We are bound to have families. We are bound to make suitable provision for them. Malthus be damned." The old economic doctrine proceeded on the ground that laborers would act without foresight, and thus sink to the bottom. We have ordered the relations of classes in such a way as to make foresight ineffective, and so in a measure have fulfilled the prediction. There are not two distinct sorts of men in the world,—one sort that responds to motives and one that does not. All men respond to inducements. The chief difference between classes is found in their opportunities. When workmen are in the very act of combination for the express purpose of enhancing motives, it does not behoove us to bring against them that old accusation of an irredeemable carelessness.

Fatalism as a faith begets fatalism as a fact. Even John Bright could regard all laws in regulation of factory labor as a great mistake, fitted to dam up and divert natural forces. Yet some of the best results of the past century have been found in these laws. Employers find no difficulty in securing conditions which depress labor. Why should they find more difficulty in accepting conditions which help labor? They have had no doubt as to the effect on wages, and on the independence of workmen, of flooding factories and shops and mines with foreign workmen, who have endured all the disaster of a bad system and can be made the instruments of its propagation. If wages can be pushed downward by one set of influences, they can as certainly be pushed upward by another.

In pursuing his purposes by the legitimate means of combination, a method which is the secret of civilization, the workman has made some mistakes. This was unavoidable, and has been due partly to his own lack of experience and partly to the unreasonable opposition he has encountered. It is said that he has lost interest in labor, and in many ways retards its speedy accomplishment. There was a time when personal fidelity was relied on as a spur to exertion; but that time has passed by, chiefly through the force of circumstances. Little intercourse or good will lies between the large employer and his help. Fair and mutual gains must take the place of attachment. When the manager complains that the workman, in times of great activity, is apathetic and refuses to hustle, that he assigns tasks, rejects overwork, and dislikes piece-work, that he keeps down the number of apprentices, he should remember that unusual activity has been urged as a means of increasing profits, with no direct or certain bearing on wages. If wages and profits were bound to each other by suitable contract, the case would be greatly altered. The laborer wishes to unite his labor to his own welfare,

and he holds back as a means of securing this object. The fundamental idea of a trade union is that workmen shall act together, making common cause in the pursuit of their mutual welfare. The employer, on the other hand, desires in every way to break up this combined action. The agents of it are very distasteful to him. If he can stampede workmen, break their ranks, and lead the more enterprising to desert their fellows, the old relations will reappear, and he will shortly command the situation. The phalanx is broken, and slaughter commences. The workman must espouse the cause of every workman, or the weaker ones drop from the ranks and are ready, when any struggle arises, to consult their own advantage. The very movement in which he is engaged compels the workman to make all the interests of labor his own. The equalizing tendency must be allowed to prevail, till some just and admissible discriminations as to skill become possible. These cannot be established in the presence of the enemy, when deliberation is taken for weakness and leads to division. If the two parties could be brought to a peaceable parley, claims and classes might be established, and each person be protected according to the volume of his power, the sluggish not driven by the active, nor the active restrained by the sluggish. This complete adjustment is impossible till both employer and employee are willing to come to terms by means of it.

The labor movement has been the occasion of able, sustained, and fair-minded leadership. If conference is welcome, and real grievances are pointed out, the workman will not be the last to correct them. The superiority of leadership and of reasonableness in advancing claims was very manifest in the coal strike. The workmen, pressed by immediate and urgent wants, are bound over to a patient and moderate temper. This is illustrated in regrettable violence. Notwithstanding the brute force

and violent passion which are sure to be present in the ranks of workmen, notwithstanding the degree to which they are hampered in the use of legal and peaceable means, trade unions are arraying themselves more and more on the side of law, and making a quiet appeal to their fellow-citizens. We are to remember that the community at large is not an impartial tribunal in labor disputes. The average citizen is unduly inclined to the existing order. The laws and courts have been built up about it. Wealth governs our daily affairs. Most persons have at least a little to do with labor, and it is not inconvenient to find it pliable. Many near and remote advantages depend on the present relations of employer and employee. Any serious modification of them seems ready to topple down the economic structure and put confusion and anarchy in its place. Justice, urged by a single class in an unusual direction, encounters great obstacles in making its plea.

The workman, pressed by so hard a struggle, does not find himself at liberty to recognize at once every just claim urged upon him. It must take its position with reciprocal claims which he himself advances. He may not be willing that trade unions should be incorporated, as he thereby exposes joint funds to the inroads of the enemy. In restoring the balance of accountability, and in making the contracts into which he wishes to enter enforceable, incorporation is desirable. But the workman cannot afford to throw away any immunity which his poverty gives him till just and accessible tribunals are established, and the wealth of his antagonist no longer controls legal procedure. Existing courts are schooled in the rights of property, and hold in light esteem the personal rights of the laborer. They are slow, difficult of access, and costly in the remedies they offer, and place the two parties in a labor dispute on very unequal terms. They annul by injunctions the remedies of the workman, and put no other remedies

in their place. When just and fitting tribunals are established, the attitude of the workman will be altered. On the whole, the patience, forbearance, and perseverance which trade unions have shown in England constitute a most encouraging chapter in human history. Some reaction is showing itself in the decision that claims hold against trade unions without an act of incorporation, and in a closer restriction of boycotts; but these look not so much to retreat as to a permanent readjustment of relations in the interests of both parties. In America the arrogant claims of capital, its sense of being the all-sufficient and only sufficient agent of production, the degree in which we stand dazed by the parade of commercial power, the contempt we entertain for a principle developed in far-off Australia, have made us dislike the labor movement, and think lightly of the new rights which it implies.

We are ready to assume that the right to labor gets expression in the "scab," and the denial of that right in the trade union. The exact reverse would seem to be the truth. The entire contention of the union is to secure a social status, the power to form and enforce suitable contracts as safeguards of labor, thereby putting the rights of labor beyond the caprice of the employer. This safety of labor depends exclusively on the trade union. If it succeeds, the fitting terms of such contracts will be slowly determined. If it fails, all the claims of labor will fail with it. All the rights of labor lie for discussion and determination between the employer and the employee. It is the unsatisfactory character of this relation that is the ground of controversy. The employer so well understands this that his bitterest hostility is directed against the union and any extension of the union that serves to give it more power. He frequently anticipates all discussion of claims by a flat refusal to recognize the organ-

ization through which they come. He will deal with workmen separately, or, if not that, with his own workmen separately. He undertakes to determine the ways in which workmen shall consolidate their power. The "scab" is the resource of the employer in breaking down workmen, and in this connection he begins to talk of the right to labor. Yet the scab has no right to labor conceded him by the manager. The scab is taken on and dismissed as suits his own convenience, and this solely that his own power in dealing with the laborer may be unrestrained. The scab makes and enforces no contract. He is present that no contracts may be made and enforced. The scab lends himself to the tyranny of the employer, and secures in return only a brief period of employment. When a new equilibrium and a lower equilibrium shall have been established, he, having done what mischief he was able to do, falls back to his old position of waiting for farther trouble. Between the scab and the unionist no rights are to be gained. The unionist held his own job, and had not yielded it. The scab steps in to oust him under conditions inimical to the entire class of laborers. The cry of the right to labor made in behalf of the scab is a misleading cry, designed to divert attention from the true issue. His own chances of labor are in no way interfered with. If the scab succeeds, he throws some one else out of labor, and cripples labor in its entire extent. It is this fact that is the ground of detestation in which he is held.

The intelligent non-union laborer, directly involved in a strike, frequently recognizes this dependence of interests in employees, and makes common cause with the union. It is the soundness of the underlying principle which has sustained trade unions, and carried them forward in face of the opposition of employers, of the indifference of the community, and of the majority of their own class.

In a discussion of this question with a judge of a United States court he remarked, "If a man was willing to work and an employer was willing to have him work, he did not see why those facts did not settle the question." They do settle the question so far as existing law is concerned, and open the question so far as a fitting relation of productive classes is concerned. The settlement assumes that workmen can make and enforce no contract, that they are subject to the will of the employer and beyond the protection of the law. If a contractor, under an agreement to put up a building, should, in the progress of the work, find himself at disagreement with his employer as to the interpretation of certain specifications in the contract, it would not be in order for the latter to say, "There is a man ready to take up and complete the work as I wish it to be done: all you have to do is to stand out of the way." "Not in the least," would be the response. "I have put myself to expense, I have declined other work, and, moreover, I expect to make something out of the job. The difference in the rendering of the contract must be adjusted, and I must proceed."

In the case of the laborer he is first robbed of the power to make a contract, and then robbed of his opportunities because he has no contract. The thing under contention is the power of contract and the rights which go with it. The law and the administration of the law and the action of the "scab" under the law, when they oppose themselves to a fundamental right in a great class, are one and all hostile to democratic society. We can secure no organic completeness in society till every part ministers to every other part in reciprocal advantages. It is on this claim that the rights of labor rest.

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THE DISTRIBUTION OF MONEY BETWEEN THE BANKS AND THE PEOPLE SINCE 1893.

SINCE the repeal of the Sherman Silver Purchase Act in October, 1893, gold and bank-notes have been the only elements in the money of the United States susceptible of important change either of increase or decrease. The greenbacks have remained fixed at $346,700,000 since 1878, and the various silver issues have slowly increased through the coinage of the bullion purchased under the act of 1890.[1] Bank-notes, though the possibility of both contraction and expansion has been always present, have not responded to varying demands for money. Throughout the ten years they have tended upward, at first slowly in response to somewhat lower prices for government bonds, and more rapidly immediately after the passage of the Currency Act of 1900, which rendered their issue slightly more profitable, but in no way changed their essential character. In general, and particularly on the side of contraction, it may be said that our present system of bank-note issue is closely analogous to an issue of government paper, and that the situation would not be greatly changed if in place of the notes an equivalent quantity of greenbacks were to be issued by the government. Gold, then, is the only element in our monetary system which is subject to increase and decrease through the play of general economic forces; and the adjustment of the volume of money in the country to varying requirements is almost entirely dependent upon changes in the amount of gold.

The ten years since 1893 present two strongly marked

[1] This increase has been between 25 and 30 million dollars, or, if we include subsidiary coins, between 50 and 60 millions.

periods in general economic conditions, and consequently in our monetary experience. Business depression following the crisis of 1893 characterized the four years to the summer of 1897, and marvellously rapid expansion and activity the succeeding years. During the years of depression our currency was unquestionably redundant, and the amount in circulation was somewhat reduced, though with great difficulty; while during the second period it increased with unprecedented rapidity, and was readily absorbed.

The volume of money in the country was temporarily increased, as a direct consequence of the crisis of 1893, through gold imports and by the issue of bank-notes to meet the demand for money for every-day use, the dearth of which during the weeks of panic was pronounced and wide-spread. At the close of the period of panic the gold movement was immediately reversed, and for the three years ending with June, 1896, net gold exports amounted to $113,000,000. The actual amount of gold in the country, however, was diminished by only 30 millions, the difference being offset by domestic production. The loss by exports would doubtless have been greater but for the special efforts which were made to check the drain in order to protect our stock of gold, which was all too small to support the other kinds of money in the country. During the same years increased issues of bank-notes and of silver almost equalled the loss of 30 millions in gold, so that the total volume of money in 1896 was but 3 millions less than in 1894. The actual amount of money in circulation, however, was at length reduced by the successive bond sales made to protect the Treasury gold reserve; and its volume in July, 1896, was 154 millions less than in 1894, Treasury holdings having increased by 151 millions. The experience of these years showed with absolute definiteness that our stock of gold was insuffi-

cient, and that our monetary system was fundamentally unsound, because normal contraction could take place only by weakening the gold foundation of the entire monetary structure.

The difficulties of the monetary situation disappeared after the summer of 1896,—somewhat earlier than the revival of business activity. As has not seldom happened in our economic history, our exports suddenly expanded in consequence of increased European demand for our agricultural products, and in the year 1896–97 we received net gold imports of 44 millions. In the following year the European demand was even more pronounced; and bountiful crops, sold at high prices, gave the necessary impulse to a general revival of business activity. Each year since net gold imports began has shown an enlarged volume of money in the United States; and for three years—to 1899—the increase was almost entirely in gold. Net gold imports of 161 millions, together with our own production, raised our stock of gold by 364 millions, while changes in other kinds of money brought an increase of some 30 millions.

In the year 1899–00 the gold movement was reversed, net exports of about 3 millions taking place. During the following three years gold exports and imports very nearly balanced, the result of the four years taken together showing a net loss of about 10 millions. During these four years, (1899–1903) however, a further increase of 494 millions had taken place in the volume of money in the country, though the proportion of gold increase was much smaller than in the three years from 1896. We retained practically all of our own domestic production of gold, and this, after making allowance for the estimated quantity absorbed in the arts,[1] gave a balance of 285 millions for

[1] The government estimate of the gold entering into circulation is probably too high, but is not a seriously disturbing factor in comparisons over short periods of time.

monetary purposes. Nearly the entire remainder (172 millions out of 209 millions) was the result of additional issues of bank-notes. The following table shows (in millions of dollars) the growth of different kinds of money between 1896 and 1903, and indicates the enormous improvement which has taken place:—

	Gold.	Silver.	U.S. Notes.	Bank-notes.
July 1, 1896	599.6	627.7	346.7	226.
July 1, 1903	1,248.7	675.6	346.7	413.7

In 1896 gold formed but one-third of our total stock of money, while in 1893 it was very nearly four-ninths. Whatever the defects of our system,—and they were certainly serious enough during the period of contraction,—it may be regarded as fortunate that in the following years the increase of money in this country was hardly possible except through the addition of gold. In 1896 the amount of gold in the country formed but a slender basis for the rest of our currency. At present the greatly increased stock of gold, coupled with the larger population, which absorbs at all times a larger quantity of our fiduciary issues, places our monetary system upon a secure basis, and renders much more safe any modification of our banking law designed to give greater freedom of issue. Such freedom during the last seven years, had it resulted in a large increase in the volume of bank-notes, would have tended, at least in a measure, to have checked the accumulation of gold.

Even more striking than the improvement in the general character of our currency is its unprecedented increase in volume. In 1896 the total amount of money in the country was $1,800,000,000. In 1903 it had increased by nearly 50 per cent.,—to $2,684,000,000. The

per capita amount of money in circulation—*i.e.*, outside the Treasury—in 1896 was \$21.10; and in 1903 it was \$29.42. This enormous increase is certainly unprecedented in our history, and the mode of its absorption presents a number of interesting problems.

In any analysis of the actual distribution of the money of the country the most obvious point of departure is to distinguish the money in the hands of the people from the money in the banks. The functions of the two are quite distinct; and their relations, if any exist, certainly do not lie upon the surface. In the reports of the Comptroller of the Currency an estimate is made of the total amount of money in all the banks of the country. For the national banks this is an amount which is definitely known. For the other banks it is largely an estimate which may be wide of the mark. As an indication, however, of changes from year to year the figures are sufficiently accurate to warrant their use.

The following table shows, in millions of dollars, the total amount of money in circulation (*i.e.*, outside the Treasury), the amount in the banks,[1] and in the hands[2] of the people on June 30 of each year:—

	Money in Circulation.	Money in the Banks.		Money outside the Banks.	
			Gain or Loss.		Gain or Loss.
1893	1,596	515		1,080	
1894	1,660	688	+ \$173	971	− \$109
1895	1,601	631	− 57	970	− 1
1896	1,506	531	− 100	974	+ 3
1897	1,640	628	+ 97	1,012	+ 38
1898	1,837	687	+ 59	1,150	+ 138
1899	1,904	723	+ 36	1,180	+ 30
1900	2,055	749	+ 26	1,305	+ 125
1901	2,175	794	+ 45	1,380	+ 75
1902	2,249	837	+ 43	1,411	+ 31
1903	2,367	848	+ 11	1,519	+ 108

[1] *Statistical Abstract of the United States*, 1903, p. 31.

[2] *Comptroller's Report*, 1903, p. 39.

Taking first the period of contraction, comparison shows for the year immediately following the crisis a smaller amount in the hands of the people and increased holdings by the banks, while in the two following years the amount of money outside the banks was almost stationary, and reserves were considerably reduced. During the first year of increased volume of money, 1896–97, 97 millions out of 134 millions went into the banks. The succeeding year showed another large gain (59 millions) on the part of the banks, followed by four years of much smaller gains, and in 1902–03 the quite insignificant amount of 11 millions. On the other hand, the first large increase of money in the hands of the people came a year later than that of the banks, and for the whole period the banks made the greater relative gain. Further analysis, however, shows that the amount received by the banks has been comparatively small since 1899,—124 out of 464 millions,—and that, although widely fluctuating from year to year, the amount absorbed by the people, if we take two-year periods, has been uniformly large.[1] Notwithstanding the continuous increase of our stock of money from year to year, the demand for its use outside the banks has been so great as to leave a distinctly decreasing proportion to be added to bank reserves. This tendency is far more strikingly shown, if we take the figures of the cash reserves of the national banks. Cash reserves of the national banks in millions of dollars on dates nearest July 1 of each year were as follows:—

[1] The estimated per capita amount of money outside the banks since 1893 is as follows:—

1893	$16.14	1899	$15.51
1894	14.21	1900	17.11
1895	13.89	1901	17.75
1896	13.65	1902	17.90
1897	13.87	1903	18.88
1898	15.43		

Comptroller's Report, 1903, p. 39.

1893	289	1899	492
1894	439	1900	502
1895	383	1901	541
1896	344	1902	570
1897	413	1903	552
1898	471		

Thus a gain of 127 millions in the two years 1896–98 was followed by a gain of but 99 millions in the four succeeding years and an actual loss of reserve in the year 1902–03. From every point of view our figures indicate the capacity of the people to absorb a larger and larger amount of money in each year of business activity since 1897.

This increase in the amount of money in the hands of the people was closely paralleled by an increase of the purchasing medium based upon credit in the form of checks. The gain in cash reserves of 1896–97 was not accompanied with advancing loans, and, as has been seen, there was no appreciable gain in the amount of money in everyday use. Then, as always, loan expansion was dependent not only upon the ability and willingness of the banks to lend, but also upon the presence of conditions which give promise of profitable returns upon the investment of capital. Since 1893 the banks had generally found themselves possessed of a larger reserve than was usual with them, yet were unable to increase their loans to a public which amid the prevailing depression could see no probability of gain from business ventures. The increased cash holdings of 1896–97, therefore, simply paved the way for rapid expansion of credit when at length, in the autumn of 1897, business activity was renewed.

The growth of banking credit, and of the purchasing medium to which it gives rise, may be studied from the movement of deposits, of loans, or from the statistics of bank clearings. Of the three, deposits would seem to be the least significant. Aside from notes, deposits

represent the demand obligations of the banks; and it is probable that the bulk of them are due to credit advances. A considerable portion, however, arises from money actually paid into the banks; and the growth of deposits due to this cause represents no increase of credit. This is particularly the case with total deposits, a considerable part of which is due to banking reserves deposited with other banks. Individual deposits are more satisfactory, but are an uncertain guide because of the large amounts of idle funds which at time accumulate seeking investment. Loans are a much better indication of the movement of credit, because they are almost invariably secured for immediate use. If, however, the borrower draws out the proceeds of his loan in actual money, no increase of credit as a purchasing medium takes place, although in this country, where the use of checks is widely diffused, this is a factor which may be neglected, at least in the comparison of changes from year to year. In clearing-house statistics we have an even better indication of the fluctuations in the use of credit, and of variations in the check form of the purchasing medium. The rapidity of the circulation of money defies analysis altogether; but, for what may be called the rapidity of circulation of deposits, clearings provide an approximate measure. There are at present in the neighborhood of one hundred clearing houses in the United States, and they are found in sufficient numbers in all parts of the country to give the totals of their clearings a fairly representative character.

The following table shows the amount of loans and of deposits of the national banks (in millions of dollars) on the date of the Comptroller's returns nearest the 1st of July of each year, and annual returns of clearings (in billions of dollars) to September 30 of all the clearing houses of the country, omitting New York:[1]—

[1] Stock exchange operations form so large a part of the clearings of New York City, and lead to such wide fluctuations from year to year, that it seems

	Individual Deposits.	Loans.	Clearings.[1]
1896	1,668	1,971	22.
1897	1,770	1,977	22.8
1898	2,023	2,163	26.1
1899	2,522	2,492	31.5
1900	2,458	2,623	32.6
1901	2,941	2,956	37.8
1902	3,098	3,221	41.2
1903	3,168	3,415	43.2

Each column of figures gives similar results, all indicating an enormous expansion of credit and of the purchasing medium in the form of checks,—an increase distinctly greater than that of the money in hand-to-hand use. Detailed analysis of these figures from year to year is not necessary for our purpose, since their movement is in the same direction throughout the period. Measured by loans and clearings, the expansion of credit since 1897 has been continuous and remarkably steady year by year. The movement of deposits has been less regular; but, taking the period as a whole, it has not been greatly different. The parallel growth of checks and of money in every-day use is certainly striking, and suggests that an increase of the purchasing medium in one form cannot go far without an increase in the other. That this is most probably the case will be seen from an examination of the functions of the check contrasted with those of money in every-day use.

When in 1897 business activity was renewed and loans began to expand, in the vast majority of instances the

best to omit them altogether, although it may be noted, in passing, that they are considerably larger than those of all the other clearing houses of the country.

[1] Some small part of the increase in clearings is due to the formation of new clearing houses since 1896; but such additions are not sufficient to seriously affect the totals from year to year, or to make a difference of more than five hundred millions for the entire period. *Comptroller's Report*, 1903, pp. 365–67.

increased payments which followed were made by checks to persons, who in turn deposited them in their banks. Though a particular bank might lose cash, the amount of money in all the banks would remain unchanged. It is only when a check is received by a person who has no account with a bank, or when payments are to be made for which checks are not serviceable, that money is usually drawn out; and, even in such cases, after a time the money, being paid to others, will flow back to the banks[1] unless there are active forces at work tending to create a larger demand for money to be used constantly for hand-to-hand payments or to be retained in the pockets of the non-check-using members of the community. Most certainly the immediate and direct influence of increased loans cannot be said to affect that demand. Indirectly, however, the creation of loans will be found to have a strong influence in that direction.

The conditions which favor loan expansion—active and prosperous business conditions—also tend directly to increase the amount of money required for hand-to-hand purposes. During a period of economic activity, employment is more general and regular; and, even though the rate of wages is at first unchanged, a larger total goes to the non-check-using classes in the community. A greater amount of purchasing power is at their disposal; and that necessitates the withdrawal of a larger amount of money from the banks, either in the form of bank-notes or of the various kinds of money which can be counted as bank reserve. As prosperity is diffused, numbers of people enter the check-using class, and in so far reduce the demand for actual cash; but they do not appreciably retard the absorption of an increased amount of money by the people. Moreover, the continuance of a period of prosperity increases the demand for money

[1] The temporary movement of money to the South and West for crop-moving purposes is a familiar illustration of this tendency.

in another way, since after a prolonged period of steady employment multitudes of people, who seldom had money in their pockets for more than a few hours or days after receiving their weekly wages, now have money enough to last through the week, and have at all times a larger amount in their pockets or at their homes.

Up to this point we have noted influences at work during a period of active business tending of themselves to absorb increased amounts of money, quite regardless of changes in the level of prices or of wages. The purchasing medium at such times, however, invariably expands more rapidly than the exchanges of commodities, and prices advance. In the first instance the advance is chiefly in wholesale prices, and is directly owing to the increase of bank loans and of the purchasing medium in the form of checks. The transformation from depression to business activity is, as a rule, strikingly rapid, even though the conditions which make the change possible are the growth of months and years. Some favorable circumstance gives rise to a more hopeful spirit, the wheels of production are quickened, and the growing demand for accommodation at the banks is reflected in a steadily increasing volume of loans. Both wholesale and retail prices move upward, but the advance of the former is at first more general and rapid. Profitable sales of commodities which are advancing in price further quicker production, and the gains at first go chiefly to those classes in the community which use checks for almost every purpose and whose increased purchases even for personal use would not lead to the withdrawal of money from the banks. Even the rise of retail prices does not seem of itself to require the use of greatly increased amounts of money for hand-to-hand purposes. It is not probable, however, that the rise of either wholesale or of retail prices could be maintained

if the purchasing power at the disposal of the people who do not use checks remained unchanged.[1] Any considerable advance of prices is certain to lead to higher wages and salaries, though the movement is far more slow and irregular. It is owing to this close relationship between prices and money incomes that the increase of bank loans causes greater absorption of money by the people. When purchasing medium in the form of checks brings about a general rise of prices, the advance in wages and salaries which follows creates in turn greater requirements for purchasing medium in the form which will pass readily from hand to hand.

During the period under review this sequence of causes and effects can be readily seen. The added amount of money in 1896 and 1897, which went almost entirely into the banks, did not lead to higher prices. In fact, prices moved downward until the summer of 1897; while during the three following years of rapidly expanding loans the index numbers of *Dun's Review* and of the Department of Labor show an advance of prices amounting to 20 or 25 per cent.

We may conclude, therefore, that during a period of economic activity there are two influences at work tending to increase the demand for money outside the banks. More general and regular employment exerts an immediate and continued influence, while the expansion of credit indirectly and somewhat later in time tends in the same direction.

Under our present monetary system this demand for money for every-day purposes exerts a powerful though unnoticed influence upon the banks, tending to check the expansion of credit. When this demand is not met

[1] The adjustment of production of particular commodities to diminished consumption of a large part of the population could hardly be made without enormous friction, and would almost certainly check the activity of business and the advance of prices.

by the issue of notes, money is taken which would otherwise be serviceable for purposes of reserve,—gold, silver, or greenbacks. During the last seven years the issue of notes has fallen far short of the amount absorbed by the people, having furnished but $187,000,000, out of a total of $544,000,000. Had our system permitted the issue of notes as freely as the extension of credit in the form of deposits, a much larger part of this total would unquestionably have been supplied by the banks, and they would have then retained a larger amount of money in their own vaults to serve as a reserve for a further volume of credit. This added ability to lend may be illustrated simply, if we assume a bank to have $10,000 beyond the amount of cash which its deposit liabilities require as reserve. If a loan is then made of $10,000, and the proceeds are at once drawn out, no further expansion is possible. If, however, notes issued under the same reserve requirements as deposits were paid out, a further extension of credit, in the form of either notes or deposits, would still be possible, the exact amount depending upon whether it were a county bank or a bank in a reserve city. It is reasonably certain that, if reserves had been larger during the last few years, loans would have reached a higher level with a corresponding increase of the purchasing medium in the form of checks. Prices would have advanced still further, and a larger amount of money would have been absorbed by the people, thus giving occasion for a further issue of notes. The expansion of credit might have continued unchecked until advancing prices and increasing speculation brought about an unfavorable balance of foreign payments of such magnitude as to deplete reserves seriously through gold exports, and to lead to sudden contraction and general liquidation. Under our present system of bank-note issue the absorption of money for domestic purposes exerts an

influence upon the expansion of credit closely analogous to that of gold exports, but it is an influence which begins to act somewhat earlier. It is also more widely diffused among the banks, since gold exports are, as a rule, a direct drain only upon the New York banks.

A number of reasons may be given which tend to show that this restraining influence is advantageous both to the banks and to the community as a whole. During the last decade the resort to temporary foreign loans has been of frequent occurrence and upon a scale almost unprecedented in our previous history. Loans of this character may serve to postpone gold exports at a time when they might be an altogether desirable check upon the expansion of credit and the further rise of prices. The respite thus secured may be used to overcome the difficulties of a dangerous situation, but we must recognize the possibility that it may simply serve to continue and render more serious a speculative movement.

In the second place, it should be remembered that a comparatively small addition to the amount of money in the banks serves as a foundation for a very considerable increase of credit. The ratio of money reserve to deposits of the national banks has fluctuated since 1897 between 13 and 19 per cent., and on this basis an addition of $1,000,000 to the money holdings of the banks would make possible an increase of from five to eight millions in deposit liabilities. In a country where deposit banking is highly developed, restrictions upon the issue of notes do not seem to prevent the expansion of credit with as great rapidity as is in keeping with permanent and healthy growth.

Finally, a temporary danger of much importance which might follow the removal of restrictions upon the issue of bank-notes deserves careful attention. It would be possible for the banks to substitute gradually their notes

for other kinds of money now in the hands of the people, thus steadily increasing their reserves. While this process was going on, the banks would be free from the restraining fear of the diminution of their reserves, even though gold exports might assume large proportions. Ultimately, a larger amount of notes would be in circulation, a larger part of the greenbacks would be lodged in the banks, and a smaller amount of gold would be retained in the country. These results of themselves cannot be regarded as satisfactory, and they might be accompanied by dangerously rapid expansion of credit. It should be said in conclusion, however, that, if measures were taken for the gradual retirement of the greenbacks, the consequences of greater freedom of note issue which have just been outlined, would be almost, if not entirely, avoided.[1]

Considerations of this nature may be easily pressed too far, and in this connection it is fitting to recall the words of a master of banking and monetary principles: "The modern world does not discard any great agency merely because its use is attended by danger. To secure a balance of gain by minimizing the risks, always recognizing their existence and their deplorable character, has been the aim of most commercial communities in dealing with banking during at least four generations."[2] Our present system has its own defects and dangers, and it is not too much to say that they cannot be overcome until the system is so modified that the quantity of money in the country will increase and decrease with varying business conditions. This result can be secured only by the retirement of the greenbacks and greater freedom of note istue. Inelasticity on the side of contraction is a funda-

[1] The requirements of the people for bills of small denominations absorb a large part of the silver issues; and, if bank-notes were restricted to denominations of $10 and upwards, the entire amount would be absorbed for that purpose.

[2] Dunbar, *Chapters in Banking*, p. 6.

mental defect, which removes from the banks individually and as a whole some of the consequences of their operations for which they should be immediately responsible. On the other hand, the dangers which might follow from a more elastic system are by no means inevitable, and could be avoided under wise and prudent management. They are dangers which, if clearly understood, can be guarded against, but are not of a character to preclude a thoroughgoing modification of our existing law.

O. M. W. Sprague.

THE INHERITANCE TAX IN THE AMERICAN COMMONWEALTHS.

WHILE most of the progressive nations of Europe have for many years used the inheritance tax extensively as a means of perfecting their systems of taxation, its development in the United States has taken place almost wholly within the last decade. The American commonwealths, in fact, have just emerged from the first stages of inheritance tax reform; for until about 1895 the legislation was confined almost exclusively to an extension of the tax to collateral heirs. Inasmuch, however, as twenty-four States, or over one-half of the total number, have introduced the tax since 1890, and seven States almost simultaneously in 1901, the movement may now be said to have attained a distinctly national importance. The probable direction of this movement in the future constitutes an important question, which can be best answered by analyzing its past development. The successive stages of this development may be conveniently discussed under three periods, the first comprising the history of the tax from its adoption by Pennsylvania in 1826 to the year 1890, the second extending from 1890 to 1900, and the third comprising the legislation of the years 1901 and 1903.

I.

LEGISLATION FROM 1826 TO 1890.

The inheritance taxes introduced during this period either applied only to collateral heirs or were imposed merely as probate fees or taxes of very restricted appli-

cation. Ten of the States[1] introducing the tax applied it only to collateral heirs; while in all the remaining States the tax, owing to its limited application or the lowness of its rate, proved to be of comparatively little importance. Thus Pennsylvania[2] and Virginia[3] in the years 1829 and 1843 introduced a uniform probate and administration tax of fifty cents. Maryland[4] in 1845 imposed a tax of 10 per cent. on commissions granted to executors or administrators. Louisiana[5] in 1828 adopted a tax of 10 per cent. on foreign heirs; while Illinois,[6] Minnesota,[7] and Wisconsin[8] imposed comparatively low taxes, resembling fees in their nature, for the compensation of judicial officers.

In the case of the taxes on collateral heirs the property exemption varied greatly in amount, ranging from $100 in the case of North Carolina to $250 in Pennsylvania and Virginia, $500 in Delaware, Maryland, and New York, and $1,000 in West Virginia and Connecticut. Furthermore, in most cases the rates in the original acts were exceedingly low, being only 1 per cent. in North Carolina and New Hampshire, 2 per cent. in Virginia and Alabama, and 2½ per cent. in Maryland and West Virginia. While it is true that the rates did in the course of the period show a tendency to rise, this rise was only temporary, and was largely offset by the gradual increase in the number of relatives who were exempted from the tax. Penn-

[1] Pennsylvania, Public Acts of 1825-26, chap. 72; Virginia, Acts of 1843-44, p. 7; Maryland, Laws of 1844-45, chap. 237; North Carolina, Laws of 1846-47, chap. 71; Alabama, Laws 1848, p. 28, sect. 86; Delaware, Laws 1869, vol. 13, p. 366, Laws of 1871, vol. 14, chap. 21; New Hampshire, Laws of 1878, chap. 74, p. 201; New York, Laws 1885, chap. 483, p. 820; West Virginia, Acts of 1887, chap. 31, p. 111; Connecticut, Public Acts 1889, chap. 180, p. 106.

[2] Laws of 1829-30, No. 157.

[3] Laws 1843, p. 7.

[4] Laws 1844-45, chap. 237.

[5] Laws of 1828, No. 95, p. 178.

[6] Laws of 1891, p. 137; Laws of 1887, p. 183.

[7] Laws of 1875, chap. 37; Laws of 1885, chap. 103.

[8] Laws of 1868, chap. 121; Laws of 1889, chap. 176. For an extended account of the above acts see Max West's "The Inheritance Tax," *Studies in History, Economics, and Public Law*, Columbia University, vol. iv., no. 2.

sylvania, in fact, was the only State in 1885 whose rate on collateral heirs reached 5 per cent;[1] while New York and Connecticut were the only other States with so high a rate in 1890.

Graduation in rates was resorted to only in Delaware, North Carolina, Illinois, Minnesota, Virginia, and Wisconsin. An examination of these graduated taxes shows, however, that in the first two States, despite the low rate, progression was on the basis of degree of relationship only; while in the last four the tax was graduated only according to the size of the estate.[2] The graduation, moreover, was either approximately proportional or very poorly devised, the Wisconsin tax of 1889, for example, being distinctly regressive.[3] In North Carolina the graduated tax was discontinued in 1874 by being excluded from the annual revenue act. Delaware practically repealed its law in 1883, since the tax was continued only on estates passing to strangers in blood; while in Minnesota and Wisconsin the laws were declared unconstitutional because of their limited application or their violation of equality in taxation.

Viewed as a whole, the legislation of this period does not give evidence of any general movement toward the adoption of the tax. Prior to the introduction of the New York tax, temporary financial need rather than a deliberate financial policy was the dominant motive for the adoption of the tax; and in all cases prior to the New York tax of 1885, except in Pennsylvania and Maryland, the laws became ultimately inoperative either by being

[1] The rate was increased from 2½ to 5 per cent. in the year 1846.

[2] In Delaware the rate increased from 1 per cent. on estates passing to brothers and sisters and their lineal descendants to 5 per cent. when passing to distant collateral relatives or strangers; while in North Carolina the corresponding rates increased from 1 to 3 per cent. Illinois, Minnesota, Virginia, and Wisconsin imposed taxes ranging from 1/10 to 1 per cent., according to the size of the estate.

[3] 1½ per cent. on estates between $3,000 and $500,000. On estates exceeding $500,000 ½ per cent. of the $500,000, 1/10 per cent. of the excess above $500,000.

excluded from the annual revenue acts or by being nullified by the courts. The laws were introduced at widely separated intervals throughout the period; and during the decade between 1875 and 1885 we note the introduction of but a single tax (the New Hampshire tax of 1878),[1] which was destined to be immediately declared unconstitutional,[2] and which in its structure was no more advanced than the Pennsylvania tax of 1826. Likewise in the remaining five years of the period no very decided advance is apparent. The interest of these last five years lies principally in the fact that the 5 per cent. collateral tax of New York was soon to become important from a financial point of view, and was thus to be used as a model for many of the later acts.

II.

Legislation from 1890 to 1900.

The period between 1890 and 1900 was one of rapid growth. With the exception of 1890 and 1898 every year saw new States added to the list, and by the close of the decade eighteen new taxes were in operation. Associated with this rapid increase in the number of taxes there was also a strong disposition to improve the tax itself. Two new tendencies appeared prominently for the first time; namely, the introduction of progressive rates and the extension of the tax to direct as well as collateral relatives. In accordance with these tendencies ten States supplemented their collateral inheritance taxes with taxes on direct heirs. Schemes for the adoption of progressive rates were also constantly brought forward, and several radical measures succeeded in passing the lower branches of the legislatures.

A considerable number of the new taxes still applied

[1] A tax of 1 per cent. levied to defray the cost of the probate courts.

[2] *Curry* v. *Spencer*, 61 N. H. 624.

only to collateral heirs. Of the twenty-one States establishing such laws during this period, over one-half applied the tax exclusively to collateral heirs.[1] In all of these States the original rate was 5 per cent., except in Louisiana, Maine, North Carolina, and Ohio, where the rates were 10 per cent., 2½ per cent., 1½ per cent., and 3½ per cent. respectively. Before the close of the decade, however, the acts of Louisiana and North Carolina were abolished; while in Ohio, Maine, and Connecticut the rates were changed to 5, 4, and 3 per cent. respectively, thus placing the rate at 5 per cent. in all of these States except Maine and Connecticut.

The original property exemption was $500 in all cases except Massachusetts, Ohio, Wisconsin, Minnesota, Vermont, Iowa, North Carolina, Tennessee, and Virginia, the first two States exempting $10,000, Wisconsin and Minnesota exempting $10,000 and $5,000 respectively on personal property, Tennessee $250, Vermont and Iowa $2,000 and $1,000, while North Carolina and Virginia subjected the entire estate to the tax. The Wisconsin and Minnesota laws, however, were nullified by the courts; North Carolina repealed its law in 1899; while Massachusetts and Ohio changed their $10,000 exemption to $500 and $200, thus leaving the property exemption for collateral relatives at $500 in all of these States except five. In this connection it should also be said that there existed a marked tendency to exempt bequests for charitable, educational, religious, or purely public purposes. This policy began in New York and Connecticut in the previous period, and was extended to ten States in this period,—Iowa, Massachusetts, Montana, Vermont, Cali-

[1]Massachusetts, Laws of 1891, chap. 425; Tennessee, Acts of 1893, chap. 174, p. 347; New Jersey, Acts of 1892, chap. 122; Acts of 1894, chap. 210; Ohio, Laws of 1893, p. 193; Maine, Laws of 1893, chap. 146, p. 168; California, Laws of 1893, chap. 168, p. 193; Vermont, Laws of 1896, No. 46, p. 38; Virginia, Laws of 1895–96, p. 367; Iowa, Laws of 1896, chap. 28, p. 35; Missouri, Laws of 1899, p. 328; Louisiana, Laws of 1894, No. 130, p. 165. This act applied only to foreign heirs.

fornia, Illinois, Maine, New Jersey, Ohio, and Virginia. Of these ten States only the first four provided for such exemptions in their original laws, all the remaining States adopting the policy by subsequent acts. Moreover, Louisiana, California, and Missouri provided that the entire proceeds of the tax should be applied to specific purposes, and not to the general expenses of the State. Louisiana devoted the proceeds to charitable purposes, California applied the tax to the general school fund, and Missouri appropriated it for higher education.

Lastly, we must notice the two tendencies which particularly distinguish this period from the former one; namely, the marked effort to introduce a progressive rate and to apply the tax to direct heirs. In this connection many unsuccessful attempts might be briefly referred to. In 1893 a bill providing for a tax graduated from 1 to 20 per cent., according to the amount of property, was proposed in the Nebraska legislature, but failed. In the same year a bill proposed in Pennsylvania, providing for a direct tax graduated from 1 to 5 per cent., succeeded in passing the popular branch of the legislature. The Iowa Revenue Committee of 1892–93 proposed a tax graduated from 5 to 10 per cent. on collateral heirs, and from 1 to 5 per cent. on direct heirs; but it also failed. In 1896 a bill resembling closely the Illinois law passed the lower house of Colorado, but was referred to the State Supreme Court which suggested a statute less open to objection. In the following year the New York Assembly considered a bill providing that in the case of collateral heirs, where the estate exceeded $500,000, there was to be levied in addition to the existing tax an accumulating rate of 1 per cent. for each $250,000, until the estate exceeded $3,000,000, when the aggregate rate was to be 15 per cent. In the case of direct heirs, where the estate exceeded $1,000,000, there was to be levied in addi-

tion to the present tax an accumulating rate of one-half of 1 per cent. for each $250,000 up to $2,500,000. Thereafter the rate was to be 1 per cent. on the entire estate for each additional $250,000, except that, if the estate exceeded $4,000,000, the aggregate rate was not to exceed 10 per cent. This bill met with comparatively little opposition in passing the legislature, but failed to secure the governor's signature. Equally strong was the tendency towards progressive taxation in Massachusetts. Here two bills were introduced in 1900 and 1901, providing for a tax of from 1 to 10 per cent., according to the value of the estate. In both cases, however, the measures, though passing the lower house, were defeated in the Senate.

Of the successful attempts at direct or progressive taxation, New York afforded the first instance in 1891 by supplementing its collateral tax with a tax on direct heirs, and was followed in 1893 by the direct tax of Michigan. In 1894 followed the direct and progressive tax of Ohio, in 1895 the progressive collateral tax of Missouri, and in 1896 the direct and progressive tax of Illinois. In 1897 direct taxes were adopted in five States,—namely, Minnesota, Montana, North Carolina, Connecticut, and Pennsylvania; and these were followed in 1899 by the direct taxes of Michigan and Wisconsin.

An examination of these taxes on direct heirs shows that Connecticut, Illinois, North Carolina, and Ohio were the only States in which the tax applied to real as well as personal property, the direct taxes of Michigan, Pennsylvania, Montana, Minnesota, New York, and Wisconsin applying only to personal property exceeding $5,000 in the first two States, $7,500 in the third State, and $10,000 in the last three. In all of these last-mentioned six States the rate was but 1 per cent., except in Pennsylvania, where the rate was 2 per cent. Though applied both to

realty and personalty in only four States, the importance of these taxes was minimized in Connecticut and North Carolina by the low rate of one-half of 1 per cent. and two-thirds of 1 per cent. respectively, and in Ohio and Illinois by the large exemption of $20,000. It may thus be said that none of the ten States introducing taxes on direct heirs during this period adopted what might be called a normal tax, the rate being either very low, the exemption very large, or the tax applying only to personal property. Before the end of March, 1901, the direct taxes of four of these States—Minnesota, Ohio, Pennsylvania, and Wisconsin—were declared unconstitutional,[1] while North Carolina repealed its law in 1899, thus leaving in force as the result of the legislation of this period the direct taxes of New York, Michigan, Illinois, Montana, and Connecticut.

Illinois, Ohio, and Missouri were the only three States which succeeded in passing progressive taxes. In Ohio the rate rose from 1 per cent. on estates valued between $20,000 and $50,000 to 5 per cent. on estates exceeding $1,000,000, but did not apply to estates passing collaterally. Missouri, on the other hand, applied the progressive rate, ranging from 5 per cent. on estates of $1,000 or less to 7½ per cent. on the excess above $10,000, only to estates

[1] Minnesota: *Lincoln Drew* v. *M. C. Tift*, 79 Minn. 175. The law was declared unconstitutional chiefly because it applied only to personal property, because it granted a larger exemption to lineal than to collateral heirs, and because it applied to the estate as a whole, and not to the excess above the exemption.

Ohio: *State of Ohio ex. rel.* v. *Ferris*, 53 Ohio, 315. The progressive rate, and the exemption of estates exceeding $20,000 from taxation, while taxing the whole estate if it exceeded that sum, were held to conflict with that portion of the Bill of Rights which declares that "all political power is inherent in the people. Government is instituted for their equal protection and benefit."

Pennsylvania: Estate of *J. F. Portuondo, deceased, Appeal of the Commonwealth of Pennsylvania*, 191 Pa. 28. The law was declared unconstitutional because it changed the law of descent or succession, granted exemptions other than those permitted by the constitution, and imposed a tax which was not uniform upon the same class of subjects.

Wisconsin: *Black* v. *State*, 113 Wis. 205. The law was declared unconstitutional because it imposed a tax which was considered unjust and discriminatory between heirs of the same class.

passing to collateral heirs. In Illinois,[1] as in Missouri, the graduated rate applied only to collateral relatives and strangers in blood, though Illinois distinguished three classes of heirs through a difference in the property exemptions. Soon after their passage the taxes of Ohio and Missouri were declared unconstitutional, and the Illinois law thus remained alone among the numerous acts of this period in recognizing three classes of heirs and in applying a progressive rate to estates passing collaterally.

III.

Legislation since 1900.

The close of the decade thus left very much to be desired. Ten States had applied the tax to direct heirs, and Illinois had indeed adopted a progressive scale; but there was as yet no State which applied the progressive principle to direct heirs, the tax of Ohio having been declared unconstitutional, and the proposed progressive taxes of Massachusetts, New York, and Pennsylvania having merely passed the popular branch of the legislature. In the years 1901 and 1903, however, we witness the introduction of the tax in eleven States,[2] and see in these taxes a decided advance over previous legislation.

[1] The Illinois law of 1895 proved to be of such importance as a model for later laws that its contents deserve to be stated at length. The law imposed the following rates:—

(1) 1 per cent. on the excess above $20,000 received by each of the following heirs: father, mother, husband, wife, child, brother, sister, wife or widow of the son, or husband of the daughter, adopted and mutually acknowledged children, or any lineal descendants.

(2) 2 per cent. on the excess above $2,000 received by each of the following heirs: uncle, aunt, niece, nephew, or their lineal descendants.

(3) In all other cases (estates of $500 being exempt): 3 per cent. when estate is valued between $500 and $10,000; 4 per cent. when estate is valued between $10,000 and $20,000; 5 per cent. when estate is valued between $20,000 and $50,000; 6 per cent. when estate is valued at more than $50,000.

[2] Arkansas, Acts of 1901, chap. 156, p. 295; Colorado, Laws of 1901, chap. 94, sect. 23, p. 247; Minnesota, General Laws of 1901, chap. 255, p. 402; Nebraska, General Laws of 1901, chap. 54, p. 414; North Carolina, "Revenue Act," Session 1901, p. 58; Utah, Laws of 1901, chap. 62, p. 61; Washington, Laws of 1901, chap. 55, p. 67; North Dakota, Laws of 1903, chap. 171; Wyoming, Laws of 1903, chap. 80; Oregon, Laws of 1903, February 16, 1903; Wisconsin, Laws of 1903, chap. 44.

The chief interest in these taxes lies in their rates, the great diversity of which does not permit of generalization. Utah levied a uniform tax of 5 per cent. on all estates exceeding $10,000, without discriminating between classes of heirs. Arkansas levied a rate of 5 per cent. upon all estates passing to collateral heirs, without granting any exemption; while Minnesota imposed a rate of 5 per cent. upon estates passing to collateral heirs, and a rate of 1 per cent. upon direct heirs, granting in either case an exemption of $5,000. Colorado and Nebraska modelled their progressive taxes upon the Illinois law, except that Nebraska applied the direct tax only to the excess above $10,000, while Colorado imposed a rate of 2 per cent. on estates exceeding $5,000 passing to direct heirs and a rate of 3 per cent. on estates exceeding $2,000 passing to the decedent's uncle, aunt, niece, nephew, and their lineal descendants. North Carolina followed very closely the form of the national tax of 1898 while Washington, in addition to a direct tax of 1 per cent. on sums valued above $10,000, applied an elaborate schedule of rates to estates passing collaterally.[1]

Following the extensive legislation of 1901, our interest centres primarily in the Minnesota tax of 1902. On November 6, 1894, the people of Minnesota amended their State constitution so as to permit the enactment of a tax on all inheritances above a specified exemption, which could be either uniform or graded, but whose maximum rate could not exceed 5 per cent.[2] By reason of this constitutional provision the act of 1901 was declared uncon-

[1] In North Carolina the rate increased from three-fourths of 1 per cent., where the legacy or distributive share of personal property exceeded $2,000 in value and descended to immediate relatives, to 15 per cent., when the property exceeded $50,000 and passed to distant collateral heirs or strangers in blood.

In Washington the rate increased from 3 to 6 per cent. on estates passing to collateral heirs to and including the third degree of relationship, and from 6 to 12 per cent. on estates passing to more remote relatives or strangers.

[2] Article 9, sect. 1, p. 48, Legislative Manual, 1897.

stitutional mainly because it applied only to personal property and because transfers of property to collateral heirs were taxed on their full value when exceeding $5,000, while in the case of lineal descendants the rate applied only to the excess above the exemption.[1] As a result of this decision, the Minnesota legislature in its extra session of 1902 enacted another law which imposes a rate of one-half of 1 per cent. in the case of direct heirs and of 10 per cent. in the case of collateral relatives, the tax in either case to be computed upon the value of the property in excess of $10,000.[2] In view, however, of the constitutional provision which limits the maximum rate to 5 per cent., it would seem that that portion of the law which places the rate at 10 per cent. in the case of certain heirs is again unconstitutional.

Turning now to the legislation of 1903, we find that five new acts were added to the list; namely, those of North Dakota, New York, Oregon, Wyoming, and Wisconsin. Of these five States, North Dakota was the only one to adopt merely a collateral tax, which, in striking contrast to the legislation since 1900, imposed the low rate of 2 per cent. on estates valued above $25,000. Wyoming, on the contrary, levies a rate of 5 per cent. on all property exceeding $500 in value and descending to collateral relatives, and a rate of 2 per cent. on property exceeding $10,000 in value transferred to direct heirs. New York extended its succession tax of 1 per cent. on personal property to the transfer of real estate to near relatives and lineals when the aggregate amount of the estate is $10,000 or more.[3] Oregon modelled its tax closely upon the Illinois law, except that the exemption for direct heirs extends only to estates valued at $10,000 or less, while

[1] *State ex. rel. Frye* v. *Bazille*, 92 N. W. Rep. 415.

[2] General Laws of Minnesota, passed during the extra session of 1902, chap. 3, p. 43.

[3] Session Laws, 1903, chap. 41.

the rate applies only to the excess above $5,000 received by each person.

But in sharp contrast to the general legislation of 1903, and as representing a wide departure from any previous State inheritance tax law, stands the Wisconsin Act of March 27, 1903. This act may be said to have been the direct result of the State Supreme Court decision of 1902, which nullified the act of 1899 on the ground that the $10,000 exemption of that act in applying to the estate as a whole, and not to the share received by each heir, constituted "arbitrary discrimination, and not classification."[1] Thus the court says in part: —

> As already pointed out, under this provision the $10,000 limitation or exemption is based on the size of the whole property devised or granted, and not upon the amount received by each individual legatee or grantee. Thus it results that one collateral relative, receiving a legacy of $2,000 from one testator whose estate amounts to $9,500, pays no tax, while another collateral relative in the same degree, receiving a legacy of $2,000 from another testator whose estate amounts to $10,500, is obliged to pay a tax. Here is unlawful discrimination, pure and simple. No rational distinction or difference can be drawn between the legatee simply because the estates from which their legacies came are of slightly different size. They are both within the same class, surrounded by the same conditions, and receiving the same benefits. One pays a tax, and the other does not. This is not the equal protection of the laws.

To avoid the discrimination thus set forth by the court, the legislature enacted a law which deducts the exemption from each individual share, and taxes only the remainder. The act, moreover, computes the tax on the fractional part comprised within each of a number of property classifications, the total tax on each individual share being the sum of the various items. The following is the progressive schedule of this tax:—

[1] *Black* v. *State*, 113 Wis. 205.

THE INHERITANCE TAX IN WISCONSIN.

Indication of Relationship.	Property Exemption.	Rates Applicable to the Fractional Part between.				
		On excess after deduction of exemption from $25,000. %	$25,000 to $50,000. %	$50,000 to $100,000. %	$100,000 to $500,000. %	Excess above $500,000. %
Husband, wife, lineal issue, lineal ancestor, adopted or mutually acknowledged child	Widow, $10,000 others, $2,000	1	1½	2	2½	3
Brothers, sisters, and their descendants, wife or widow of a son or husband of a daughter	500	1½	2¼	3	3¾	4½
Uncles, aunts, and their descendants,	250	3	4½	6	7½	9
Brothers or sisters of the grandfather or grandmother, or their descendants	150	4	6	8	10	12
Persons in other degrees of collateral consanguinity, strangers, and corporations not exempt	100	5	7½	10	12½	15

IV.

Summary.

Having passed in review the most important steps in the growth of the inheritance tax in the American Commonwealths, we are now in a position to summarize the general results. During the three-quarters of a century following the Pennsylvania tax of 1826, we have traced a development from small beginnings to a system comprising thirty States in the extent of its application, and which in a few instances is beginning to resemble some of the highly developed taxes in foreign countries. In the period preceding 1890 no general advance is discernible, and in the decade between 1875 and 1885 inheritance tax legislation was practically suspended. Applied only to collateral heirs or levied merely in the form of a fee and introduced at widely separated intervals, the taxes of this period show a lack of scientific structure, and a tendency to become inoperative by being omitted from the annual revenue acts or by being declared unconstitutional. Our chief interest in this period lies in the fact that certain taxes, like those of Pennsylvania and New York, were to be used as models by other States. In the following period our interest centres primarily in the New York direct tax of 1891 and the Illinois direct and progressive tax of 1895, both of which were to be used in turn as improved models for later acts. Subsequent to 1900 our interest centres chiefly in the Wisconsin tax of 1903, which far surpasses any earlier law in the scientific character of its provisions.

As might be expected, the existing laws still leave much to be desired. Sixteen, or over one-half, of the taxes still apply only to collateral heirs; yet foreign experience indorses a tax on direct heirs as desirable. While progression has obtained a permanent place in most of the

important foreign taxes, its adoption in this country is limited to seven States. Undesirable provisions also exist in eight other States, Illinois exempting $20,000 of the property passing to each direct heir, Minnesota and Connecticut granting an exemption of $10,000 to strangers in blood as well as to direct heirs, Michigan, Montana, and North Carolina extending their direct taxes only to personal property, and Utah taxing all heirs alike at a uniform rate of 5 per cent. and with a uniform exemption of $10,000. To these States may be added North Dakota, Maryland, and West Virginia, which, while taxing only collateral relatives, impose a rate of 2 per cent. and 2½ per cent. The constitution of Minnesota, furthermore, limits the progression to a maximum rate of 5 per cent. Alabama, according to her constitution, is only permitted to adopt a tax on collateral heirs with a rate not exceeding 2½ per cent.; while in Louisiana the constitution limits the tax to 3 per cent. for direct heirs and 10 per cent. for collateral heirs, specifying, however, that these rates can be imposed only on such personal property as has escaped its burden of taxation.

Yet undesirable as some of these constitutional restraints and statutory provisions may seem, we cannot help observing progress in many directions. Most of the States have adopted similar rates and property exemptions in their collateral taxes. Fourteen, or nearly one-half of the States taxing inheritances, have also applied the tax to direct heirs; and of these taxes all were passed since 1890, all but two since 1896, and nine since 1900.

As previously shown, six of the taxes on direct heirs passed before 1900 applied only to personal property; and, of the remaining four States possessing such a tax, Connecticut and North Carolina levied exceedingly low rates, while Illinois and Ohio granted exceedingly large exemptions. Strikingly different is the situation afforded

by the legislation of 1901 and 1903. Of the eleven taxes introduced in these two years, all but two applied to direct heirs and all but four contained progressive rates. If analyzed, these taxes will show a distinct advance over previous legislation,—an advance which becomes apparent if one observes the following changes:—

(1) The progressive principle has been resorted to more extensively. The Illinois law, standing alone among the taxes passed prior to 1901 in distinguishing three classes of heirs and in possessing a progressive rate, was followed by Colorado, Nebraska, and Oregon. Washington, though applying the progressive principle only to collateral relatives, extended it further than did Illinois; and North Carolina in 1901 for the first time distinguished five classes of heirs, and applied the progressive rate to direct as well as collateral relatives.[1] The Wisconsin law of March 27, 1903, however, stands out as the landmark of this period. For the first time was a law passed in the United States which recognizes five classes of heirs, which grants a separate exemption to each one of these classes, and which imposes a progressive rate graduated according to the amount of all property above the specified exemption received by each beneficiary.

(2) The rates are higher than in the preceding period. At the close of the century the maximum rate for direct heirs was 1 per cent. and for collateral heirs 6 per cent. Subsequent to 1900 the rate was raised to a maximum of 5 per cent. for direct and 15 per cent. for collateral relatives. Wyoming and Colorado impose a rate of 2 per cent. upon all estates passing to immediate relatives; and Utah levies a direct tax of 5 per cent.,—a rate which, in view of the fact that the great majority of estates pass between immediate relatives, makes this tax the heaviest in the country at the present time. Wisconsin for the first

[1] By the Revenue Act of 1903 the progressive rate in North Carolina was retained only on estates passing to remote relatives and strangers in blood.

time increased the rate on all property above the specified exemption from 3 per cent. in the case of immediate relatives to 4 per cent. in the case of brothers and sisters and their descendants, to 9 per cent. in the case of uncles, aunts, and their descendants, and to 15 per cent. in the case of remote relatives or strangers.

(3) The property exemptions granted to direct heirs are lower than in the preceding period. Of the existing taxes passed prior to 1901 Michigan was the only State with an exemption of $5,000 for direct heirs. To-day, however, Wisconsin, though exempting estates of $10,000 passing to the widow, grants an exemption of only $2,000 to the husband, lineal issue, lineal ancestors, and adopted children, $500 to brothers and sisters and their descendants, and only $250 to uncles, aunts, and their descendants. In Colorado, Nebraska, and Washington the exemption, instead of being $20,000 as in the Illinois law of 1895, is placed at $5,000 in the first State and $10,000 in the last two. The Oregon act, likewise modelled upon the Illinois law, exempts estates of $10,000 or less, and specifies that the tax shall apply only to the excess above $5,000 received by each person.

(4) Instead of three-fifths of the taxes on direct heirs applying only to personal property, as was the case prior to 1900, all of the nine States introducing a direct tax since that year, except North Carolina, have applied it to both personalty and realty. Particularly significant, too, from a fiscal standpoint is the extension in 1903 of the New York succession tax to transfers of real estate.

V.

Financial Significance of the Tax.

In connection with the growing effort on the part of the States to extend and improve the inheritance tax,

we may also briefly note its remarkable growth from a financial point of view. A comparison of the returns for 1900 with the returns from other sources of State revenue shows that in New York the tax produced nearly 19 per cent. of the total tax receipts, while in Illinois and Pennsylvania the corresponding percentages were nearly 13 and 8½ per cent. respectively. Considered as a whole, it appears that in the seventeen States where the tax had its longest existence the yield for 1900 constituted nearly 6 per cent. of the total income, and over 8½ per cent. of the total receipts from taxation.

Still more striking is the growth of the tax when compared with the growth of other forms of taxation. Between 1890 and 1895[1] the yield of the general property tax for State purposes remained practically constant, while during the same period the taxes on corporations and railways increased from $12,354,864 to $16,908,112, the taxes and fees on banks and savings-banks from $3,205,604 to $4,142,412, and the taxes on insurance companies from $3,076,731 to $4,361,984. Far more rapid has been the increase in the receipts from the tax on inheritances. In 1885 the total yield from this source in all the States amounted to $944,335, in 1890 to $1,886,509, in 1895 to $4,016,841, and in 1900 and 1901 to $7,421,645 and $7,591,438, thus showing a tendency to double approximately once in five years. In 1900 the yield was approximately equal to one-fifth of the income derived from State corporation taxes.

But, despite this rapid growth in financial importance, a comparison of the tax in this country with the leading foreign taxes still shows ample room for further development. Thus in France during the two years 1896 and 1897 the number of inheritances and donations reached by the tax aggregated 1,868,345, and was valued at

[1] This information is taken from *New York State Library Bulletin*, No. 8, "State Finance Statistics," 1890-95.

13,055,263,597 francs. In New York during the same two years—and they are fairly representative of the normal yield in that State—the total number of estates reached was but 5,180, while the total capital coming under taxation aggregated only $221,591,330. France at present obtains approximately 200,000,000 francs from this source, or about 9 per cent. of the total national revenue (exclusive of that from State monopolies). Great Britain, on the other hand, applied the tax in 1900 to 67,338 estates, valued at £426,481,000, and secured for that year a revenue of £18,409,239, or more than 19 per cent. of the total national receipts from taxation, and more than 8 per cent. of the total revenue, national and local.[1]

These figures suggest in a way the possible significance of this tax in the United States, especially when considered in its relation to the growing importance of State corporation taxes. If we recall that the yield in the United States has shown a strong tendency to double once each half-decade, and that there is still the possibility of a great extension before approximating the foreign taxes, we may safely conclude that the wealthy industrial States could in the near future, through the taxation of corporations, franchises, and inheritances, relinquish the general property tax exclusively to the local units, and thus, through a separation of State and local revenue sources, avoid many of the difficult administrative problems now associated with the general property tax. Such an extension of the inheritance tax is at least, if for no other reason, justified by its inherent merits. In the field of taxation effective enforcement is of fundamental importance. It is in this respect that the inheritance tax offers advantages over nearly all other taxes, since through

[1] For convenience of reference and comparison a summary table is appended, showing the development of inheritance taxation in foreign countries.

our probate courts it is possible to ascertain the value of the great majority of estates at comparatively small expense. Furthermore, this tax is not only easy to collect but also accords with the general canons of taxation. Compared with most other taxes, it is more certain in its incidence, and, on the whole, is neither oppressive to the tax-payer nor injurious to industry. Lastly, it should be noted that the principle of progression, which is advancing in nearly all of the leading tax systems of the world, and which has already been applied to a very considerable degree in the inheritance taxes of most civilized countries, is better adapted to this tax than to any other. It is to be hoped at least, now that the field of inheritance taxation has been relegated to the States by the repeal of the national tax of 1898, that they will adopt taxes which will be reasonably heavy and uniform, and which will embody all the essential principles for which the Wisconsin law has set the precedent.

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APPENDIX.

Progressive Inheritance Taxes in Foreign Countries.

Country.	For Collateral Heirs.		For Direct Heirs.		Strangers in Blood.		Progressivity (On basis of Property).	Other Exemptions.
	Rate per cent.	Exemption.	Rate per cent.	Exemption.	Rate per cent.	Exemption.	Rate per cent.	
Australasia:								
New South Wales,	2–10	£1,000	1–5 [1]	£1,000	2–10	£1,000	2–10	
New Zealand . .	2½–10	100	1¼–5	100	5½–13	100	2½–10	
Queensland . .	2–10	200	1–5	200	4–20	200	2–10	Legacies £20
South Australia	1–10	200	1½–10	500	10	none	1–10 [2]	
Western Australia	1–10	1,500 [3]	½–5 [4]	1,500 [3]	1–10	1,500 [3]	½–10	
Victoria	2–10	1,000	1–5 [5]	1,000	2–10	1,000	2–10	
Canada:								
British Columbia	5–10	$5,000	1½–5	$25,000	10	$5,000	½–5 [6]	
Manitoba . . .	1–10	4,000	2–10	25,000	1–10	4,000	1–10	Share $10,000 [7]
New Brunswick [8]	5–10	5,000	1¼–5	50,000	10	5,000	1¼–5 [6]	Share $200
Nova Scotia [9] . .	5–10	5,000	2½–5	25,000	10	5,000	2½–5 [6]	Share $500
Ontario [9]	5–10	10,000	2½–5	100,000	5–10	10,000	2½–10 [6]	Share $200
P.E. Island [9] . .	2½–7½	3,000	1½–2½	10,000	7½	3,000	1½–2½ [6]	
Quebec	3–8	—	½–3	3,000	10	—	½–3 [6]	
France	3¾–18½	none	1–2½	none	15–18½	none	1–18½	

[1] One-half of collateral rates on amounts not exceeding £50,000. In certain cases the rate applies to distributive shares.
[2] Progression ceases with collateral heirs at £20,000, and with direct heirs at £200,000.
[3] £1,500 exempted if estate does not exceed £2,500; if in excess, no exemption.
[4] Direct heirs pay one-half of collateral rates.
[5] One-half of the collateral rates on property passing to certain direct heirs when total net value does not exceed £50,000.
[6] Progressive schedule applies only to direct heirs. Progressivity on basis of property.
[7] Share passing to immediate relatives.
[8] Schedule rates doubled on property passing by transfer out of the province.
[9] Proceeds devoted to asylums, hospitals, and other charities.

APPENDIX—*Continued.*

Country.	For Collateral Heirs.		For Direct Heirs.		Strangers in Blood.		Progressivity (On basis of Property).	Other Exemptions.
	Rate per cent.	Exemption.	Rate per cent.	Exemption.	Rate per cent.	Exemption.	Rate per cent.	
Great Britain[1]								
Estate duty[2] . .	1–8	£100	1–8	£100	1–8	£100	1–8	£300–30*s*. tax[3]; £500–50*s*. tax
Legacy duty[4, 7]	3–10	—	1[6]	—	10	—	—	
Succession duty[5, 7]	4½–11½	£20	1½[6]	£20	11½	£20		
Switzerland:								
Lucerne	5–15	legacy 50 fr.	1	5,000 fr.	20	legacy 50 fr.	1–40[8]	
Schaffhausen .	2–8	share 200 fr.	—	—	10	share 200 fr.	2–20[9]	Employees 1,000 fr.
Zürich	2–10	legacy 1,000 fr.	—	—	10	legacy 1,000 fr.	2–15[10]	Servants 1,000 fr.

[1] Great Britain has also a "probate duty," "account duty," "temporary estate duty," and a "corporation duty."

[2] Paid upon the principal value of all property, real or personal, settled or unsettled. Settled property is subject to a further estate duty of 1 per cent., called "settlement estate duty."

[3] Small estates up to £300 gross pay a duty of 30*s*. Small estates up to £500 pay a duty of 50*s*. These duties are inclusive of all other "death duties."

[4] Legacy of any value, and any share of residue of personal estate arising under will or intestacy.

[5] Succession duty applies to a succession of the value of £20 or upwards, where the whole succession derived from the same predecessor amounts to £100 or upwards. ½ per cent. of the succession duty on lineals and 1½ per cent. on other descendants constitutes what is called "additional succession duties." This additional duty is not payable when the property subject to the succession duty is chargeable with estate duty.

[6] Rate applies to child, descendant of child, father, mother, or lineal ancestor, and is not payable where probate or letters of administration were obtained or where "account duty" or "estate duty" has been paid.

[7] The "legacy duty" and "succession duty" together practically constitute a collateral inheritance tax paid in addition to the "estate duty," with the exception, however, that estates valued at £1,000 or less are subject only to the "estate duty."

[8] 1%—20% on amounts up to 10,000 francs. Rate then increases by $\frac{1}{10}$ through a series of ten steps until it becomes $\frac{10}{10}$ higher than the primary rate.

[9] 2%—10% on amounts between 2,000 and 10,000 francs. Rate then increases $\frac{1}{10}$ for each additional 10,000 francs until it becomes $\frac{10}{10}$ higher than primary rate.

[10] 2%—10% on amounts up to 10 000 francs. Rate then increases by $\frac{1}{10}$ for each additional 10,000 francs until it becomes $\frac{1}{10}$ higher than the primary rate.

WHAT DETERMINES THE VALUE OF MONEY?

THE value of money is determined, like that of other commodities, by the principle of demand and supply. This proposition has seemed so simple upon its face that the conclusion was reached by early students of the subject that a change in the quantity of goods without change in the volume of money, or, *per contra*, a change in the volume of money without change in the volume of goods, must result in a proportionate change in the exchange value of goods as expressed in money. Hence developed the quantitative theory, expressed by John Stuart Mill in the terms that "the value of money, other things being the same, varies inversely as its quantity, every increase of quantity lowering the value, and every diminution raising it, in a ratio exactly equivalent."[1]

This proposition has a certain basis of truth, but in its application to prices it has been misconstrued and perverted. It has been taken to imply that an increase in the quantity of money in a community must result eventually, if not at once, in a corresponding increase in the prices of *all* commodities. The confusion which has so often attended the discussion of the principles which determine the value of money has been due in part to the fact that, as money is the measure of value of other things, the operation of changes in its value is more difficult to follow than changes in the values of other things which seem to be so plainly expressed in terms of money. If the supply of wheat in the world decreases, its value rises in terms of other articles, so long as the supply and demand for all those articles remains unchanged. A given quantity of wheat exchanges for

[1] *Principles of Political Economy*, vol. ii. p. 30.

more gold as well as for more cotton cloth. But the very fact of a rise in the money price of wheat reacts upon its expression in other articles, because the demand for other articles changes. The man who has to have wheat in spite of the enhanced price is compelled to reduce his demand for some other article or articles. The entire ratio of exchange between the aggregate of commodities is modified, but not in a fixed mathematical ratio. It is the same with money. In a sense, changes in the supply of money are accompanied by changes in the value of the standard metal which is used as money in relation to the whole mass of commodities, if this mass remains stationary in amount. But the manner in which this change of relationship finds expression is essentially different from that set forth by the quantity theory of money.

Between the quantity of money and the prices of commodities, relationship undoubtedly exists.[1] Few would deny that in the same community, under conditions otherwise similar, prices would be higher with a stock of money amounting to $1,000,000 than with a stock of $100,000. The questions which have caused discussion among economists are how this relationship is disclosed, whether it is a dominating factor in determining money prices of commodities, and whether changes in prices are the effect or are themselves the cause of changes in the stock of money. The more careful advocates of the quantity theory make the qualification that the principle of the ratio of the value of money to the quantity comes into operation only when other things are the same; but

[1] "There is a correlation between the value of money and its quantity, but we shall never succeed in measuring exactly the variations of this inherent value." Beaure, p. 55. Professor Willard Fisher appears to hold that this is all that is asserted by the quantity theory. The quantity theory, he declares, "does not mean that an increase in the currency will tend to raise general prices in exactly the same degree; but it does assert most emphatically that an addition to the currency will tend to raise general prices in some degree." *Journal of Political Economy*, March, 1896, vol. iv. p. 218.

it is proposed to show here that by changes in the volume of money there are set in operation, in the very nature of the case, other influences which make it impossible that other things should remain the same, thus destroying one of the premises of the theory.

There is a resistance to a uniform and sudden revaluation of all commodities in terms of money upon every occasion of change in the quantity of money, which results in determining such revaluations according to the principle of marginal utility. The essence of the fallacy which has spread such a troublesome pitfall for many students of the monetary problem has been that all other commodities than money have been treated as a unit. The true principle of the value of money is that, being but one among many commodities, changes in its quantity operate upon its relation to other commodities only under the law of the marginal utility of each. If money, by becoming more plentiful than before, should suffer a decline in marginal utility, then its relation to some commodities would change, but not necessarily its relation to all commodities.[1] It would seem to be obvious that the first effect of an increase in the monetary stock would be felt upon those particular commodities whose prices were most sensitive to changes in the money market, and that, if the effect were ever felt upon all commodities, it must be long subsequently; yet in nearly all discussions of the subject this obvious operation of monetary principles is inverted, and it is assumed, as an initial hypothe-

[1] This fact seriously impairs the precise mathematical reasoning of Professor Walras. He admits that "from one moment to another all the elements of the problem are modified," but maintains that at a given moment, other things being equal, if the quantity of money increases or diminishes, prices will rise or fall in proportion. *Théorie de la Monnaie*, p. 46. But throughout his reasoning the fact appears to be ignored that all the new money is not at once offered against all the goods offered in exchange for money. Vethake, who lays down the quantity theory with a good deal of rigidity, admits that "some commodities ordinarily fluctuate in value much less than others, and labor is such a commodity" (*Principles of Political Economy*, p. 150); but he is little disposed to accept the legitimate consequences of this fact.

sis at least, that the first effect must be general instead of particular.[1]

The quantity theory, as generally presented by those who are not careful students of monetary matters, has the three defects of putting the cart to some extent before the horse, in treating general changes in prices as caused by changes in the quantity of money instead of considering the two phenomena as interacting upon each other; of regarding such changes in prices of commodities as are influenced by changes in the quantity of money as changes in general prices instead of variable changes in particular prices; and of giving a greatly exaggerated importance to this single influence which among many has to be considered in dealing with prices.

The essential points at issue between those who declare themselves advocates of the quantity theory and those who oppose it, are partly questions of definition, on which the real difference is not so great as might appear,[2] and partly the more important questions of the method in which changes in the quantity of money operate and the degree of importance of such changes in relation to other principles affecting prices. In seeking a sound explanation of an increase of prices, accompanied by an increase in the stock of money, those who reject the quantity theory would seek the reasons, according to Professor Scott,[3]—

[1] Thus Sidgwick, usually a careful and acute reasoner, says, "It seems, however, clear that the mere fact that the quantity of money in a country is altered cannot have in itself—*i.e.*, apart from any change in the proportions in which it is distributed—any tendency to alter the quantities or relative values which are bought and sold for money, so far as the terms of exchange are settled subsequently to the alteration by competition, and not by custom." *Principles of Political Economy*, p. 245. Yet a few lines further on it is admitted that "the actual process of change in quantity of gold may alter sensibly the distribution of wealth"; and on other points a correct view is taken.

[2] Thus Laughlin, after quoting a moderate definition of the quantity theory by Professor Carver, declares that "to admit that the value of the standard can be influenced by supply is not to admit the usual quantity theory of money." *Principles of Money*, p. 339.

[3] *Money and Banking*, p. 61.

in changed conditions in the demand and supply of commodities or of gold or of both, and would explain the increase in the volume of the currency as the necessary result of an increase in the demand for money caused by the rise of prices, and in proof would refer to the axiom of monetary science that when prices are high a larger amount of money is needed to effect the exchange of a given number of commodities than when they are low.

Commodities rise and fall in their ratio of exchange with other particular commodities according to the law of marginal utility. Gold is one of these commodities. It is in itself the commodity usually most sensitive to changes in demand and supply. In a sense it is *par excellence* the marginal commodity of all others; but the others do not form a compact mass set over against gold. On the contrary, there are other commodities only a trifle less sensitive than gold to changes in exchange value. In foreign trade the surplus of gold in the money market and in bank reserves is the most conspicuous of marginal commodities; but the surplus of other articles may, and often does, respond as quickly as gold to changes in demand and supply. It is the prices of these particular articles—not the average prices of all articles—which are most affected by a scarcity of gold. The money prices of some of these articles may change radically from causes connected with the articles themselves, as from overproduction which greatly lowers their marginal utility, or from causes connected with the gold stock, or because deficient bank reserves have compelled an advance of discount rates and forced producers of certain goods to export them at reduced prices in order to realize.

It was the theory of Ricardo that gold would flow to or from a country, according to its requirements, so as to restore its normal value there, and thus maintain the true national share of the money metal. This view is well founded, if the error is eliminated from the usual

interpretation of it, that gold stands on one side and the aggregate of all other commodities as a compact, unalterable mass on the other. Surplus stocks of gold in a country, beyond what is required for its ordinary transactions, move easily to another country; but the more seriously the demand for gold trenches upon the usual and necessary stock used as a medium of exchange and for bank reserves, the more this intensity of demand reacts first upon discount rates, then upon the prices of securities, then upon the most easily exportable of commodities, and finally upon other classes of commodities.

In such movements of securities, as in those of commodities, there is no uniform change of price level, but an infinite variety of changes due to the varying marginal utility of different items under the changed conditions. The best securities might even advance in price while the more doubtful were declining, because of the higher utility of the former as a means of obtaining money. The fundamental character of foreign trade is an exchange of commodities; and the movement of other commodities acts upon the movement of that particular commodity, gold, in a manner to adjust to the best advantage the reciprocal utilities of each of them. The dominating influence of the commercial movement is well set forth by Dr. Whitaker:[1]—

> We may forget the titanic underlying force of the balance of trade so long as it keeps its equilibrium. When in its minor vibrations it turns unfavorable and then swings favorable, the influence of the discount rate is a first-rate agency to exercise in the interim some control over the gold flows. In the event that production in the different nations pursues for a period a pretty even dynamical career, the balance of indebtedness may remain in such a state of equilibrium, as far as large tendencies are concerned, that the shipments of gold which do take place are dominated by financial forces. But the rate of discount can be the ruling factor only while the "commercial" forces are quiescent.

[1] *Quarterly Journal of Economics*, February, 1904, vol. xviii. p. 232.

The national quotas of gold cannot be maintained unless the balance of total indebtedness which lies at the bottom of gold movements in the long run preserves its equilibrium.

Intensity of demand for gold and for other commodities determines, therefore, their reciprocal ratios of exchange with each other; and these ratios can scarcely remain rigid for two successive moments in succession. A large stock of gold, by increasing the supply, diminishes the relative intensity of demand for a given quantity; but the aggregate of gold in the world, or in any one country, is never at any given moment set off for mensuration against the mass of other assorted commodities. A recent writer on money, although going to extremes in his criticism of the quantity theory, gropes towards the true solution of the problem when he declares that "the causes permitting a new export are individual, and not general; are due to relative expenses of production or to changes in relative demand and supply, and not to a general change of prices."[1]

The movements of money, under the principle of marginal utility, are governed to a large extent by the rate charged for its use. If there is a disproportionate increase in the money supply of a country,—resulting, for instance, from a large production of gold,—this increase finds its first expression by an increase in bank reserves. An increase in reserves increases the loaning power of banks, and an increase of loaning power means that more circulating capital is placed at the command of the community for investment. If, however, the loaning power of the banks is already sufficient, under existing industrial conditions, for the needs of the community, an increase in the supply tends to reduce the value of the use of money. This reduction is expressed in the first instance by a decline in the rate for demand loans rather than by a change

[1] Laughlin, *Principles of Money*, p. 371.

in the money prices of commodities. Hence comes about the distribution of money according to its marginal utility in different markets, in the manner indicated by the writer who has been most earnest in denying the force of the quantity theory:[1]—

> The new gold is purchasing power over other things, at home and abroad, just as wheat is: its value at home and abroad is settled in relation to other things in the same general way as is the value of wheat, and by the same general laws of value. If a miner or a country has more gold than is needed for monetary (or non-monetary) purposes, the surplus of it is sold for other things, just as in the case of a surplus of wheat. A mining country sends gold to those other countries which, by reasons arising from the demands of business, need more bank reserves or more gold as a medium of exchange; . . . or, if none is needed for monetary purposes, then it goes to the purchasers of plate, of ornaments and the like.

If the new stock of money remains at home, it enables banks to place additional capital at the command of certain persons for buying materials and machinery for their industries. This increases the demand for such articles, and tends to raise their price. If the rise is sufficient, however, to attract such articles from abroad, the tendency will be, other things being equal, to increase the exportation of the money metal and thereby promote its international distribution. Thus the state of foreign trade is the most sensitive barometer of changes in the relation between money and certain articles, because those articles flow away from those points where their marginal utility is less than that of money to those where it is greater. Their marginal utility is necessarily graded by their price as expressed in money; but it is not the whole mass of commodities which is thus affected at once, but those whose relations to other commodities, among which money is included, have been changed.

[1] Laughlin, *Principles of Money*, p. 338.

Hence arises the important distinction, that there cannot be a change in general prices as the result of changes in the volume of money, but only changes in particular prices. The prices of certain articles may be falling because of overproduction at the very moment that the prices of others are rising because of increased demand. If the stock of money is increased, it may cause a rise in the price of those articles whose marginal utility is greatest under the new conditions. There may be one or more articles which, on the one hand, are not demanded by consumers in the existing state of individual resources, but, on the other hand, might become in large demand if the purchasing power of certain elements in the community should be increased. This might be the case, for instance, with carriages or gloves. The demand might be small at a certain stage of purchasing power. It might rise in a marked degree if the purchasing power of a portion of the community were increased by a small percentage.

Under such circumstances the increase in the quantity of money would first operate to increase the profits of certain manufacturers who dealt with the banks, and their increase of profits would enable them to increase their demand for certain articles. The usual form of stating the effect of a change in the volume of money would imply that the increased demand for commodities would be in the form of a demand for a proportionate increase in all the commodities previously used. This assumption, however, is so contrary to probability that it cannot be safely made the basis of general reasoning. On the contrary, the demand arising from an increased command over capital would almost inevitably be directed into particular channels instead of a general one. The man who was richer than before would not demand an increased stock of wheat and ready-made clothing

proportionate to his increase in wealth. He would be more likely to increase his demand for gloves and carriages. Hence the stock of carriages or gloves would become deficient in relation to the stock of gold. In that case the article exported would be gold, carriages and gloves would rise in price, and an increased quantity would be drawn into the country through the channels of foreign trade; but wheat and ready-made clothing would be little disturbed in price.

The demand for gold from abroad would become effective only when its marginal utility was greater than that of any other article which might be imported.[1] It would not be imported if securities or loans on bills of exchange were more economical. Gold would be exported only when its marginal utility was less than that of other articles which might be exported; but, when the marginal utility of these other articles declined in reference to gold by reason of an excessive production of them and a scarcity of gold, then gold would be imported in preference to other articles. In all these cases the changes must necessarily occur by changes in the relation between the marginal utility of a variety of articles, among which gold would be one.

Money is required under normal conditions as a tool of exchange, and not as the ultimate object of exchange. The demand for it as such a tool has much to do with determining its value. If the supply is excessive in its ratio to demand, its value falls; but the manner in which this fall is expressed is very different from a revaluation of the mass of other commodities in the ratio of the change in the quantity of money. The changes in the quantity

[1] This idea is expressed in a different form by Dr. Pierson: "In countries which acquire their bullion by commerce, bullion has a cost price,—is acquired by production. The cost price in this case is represented by the quantities of labor and capital that have to be applied in order to produce the goods in exchange for which the bullion is supplied from abroad." *Principles of Economics*, vol. i. p. 375.

of money which occur in a well-equipped society are not felt first even in the prices of the most sensitive exportable goods. They are felt in the form of changes in the rate charged for the use of money,—by variations of the discount rate. The modern mechanism of credit, of which the discount rate is a part, affords several steps for restoring equilibrium between the demand and supply of metallic money before prices of commodities are seriously affected.

The rule that the distribution of money is governed by the rate of discount is to be interpreted somewhat strictly. It is limited to money as a specific commodity, the tool of exchange, and to discount as the rate for short-term loans. The definition is not intended to cover all loans of capital nor loans at interest for long terms.[1] The rate of interest is the charge for the use of capital: the rate of discount includes more directly the charge for the use of money. Money is a part of capital; and the two demands—for money and capital—are often confused with each other.

The discount rate and the interest rate are not far apart when there is only a normal demand for money as such, but the discount rate rises far above the interest rate on loans for long terms when an abnormal demand for money makes it more sought after than other forms of capital. It is through the discount rate that the ability and readiness to pay money on demand is maintained by the banks.[2] Ordinary demands for

[1] "The rate of discount in the short loan market of a banking centre like London is not to be identified with the rate for loans generally—it is only the rate for special loans between special classes of borrowers and lenders, affected, no doubt, by the general rates obtainable for loans and investments in the country, but nevertheless a thing *sui generis*, and in which there may be great changes without corresponding changes in the general borrowing rates." Giffen, *Economic Studies and Inquiries*, vol. ii. p. 47.

[2] Professor Joseph French Johnson makes a further distinction between the rate of discount on commercial loans and the call-loan rate of interest, which is of some importance. He declares that "the speculator stands among borrowers as a residual claimant upon capital," getting "temporary

banking accommodation are demands for capital or for transferable credits which can be used in lieu of money for immediate needs. The mechanism of modern credit is such that considerable transfers of credit can now be made without the transfer of gold; but only credit of the best character and in negotiable form serves this purpose, because it is known to be convertible in a direct and inexpensive manner into gold.

While the use of gold for money is usually referred to as its use as a "medium of exchange," it is well pointed out by Professor Seager that there is a distinction between the gold actually employed in exchanges and that set aside in bank reserves. In view of the great increase in such reserves, including those of governments and individuals, his conclusion is probably justified, that, "if all of the different items which should be included could be exactly calculated, it would doubtless be found that the reserve demand for gold is larger than either of the other demands" for the arts or as a medium of exchange.[1] At first sight it might appear that this is a distinction without a difference, because the reserve gold is in fact in use as a medium of exchange through its paper representatives. If the reserve gold were held dollar for dollar against paper issued in substitution for it, like the gold certificates of the United States, its employment would in fact differ in no essential respect from that actually passing from hand to hand. But the manner in which it is employed in reserves is very different. It is made the basis of credits which sometimes seem indefinitely expansible.

A great diminution of metallic reserves in banks will

control of capital while it is *en route* from the saver to the entrepreneurs." Both the supply and the demand for this residuum fluctuate much more widely than the demand for commercial loans, with the result of wider differences in rates. *Political Science Quarterly*, September, 1900, vol. xv. p. 500.

[1] *Introduction to Economics*, p. 350.

undoubtedly react upon the discount rate, and, if persistent, upon the prices of those exportable goods of which the supply is verging nearest to overproduction; and a counter-influence of declining discount rates will be felt, other influences being approximately the same, when bank reserves are greatly increased. There is the essential distinction, however, that changes in the gold in reserves cannot act so directly upon the quantity of available money and credit as changes in the quantity of gold actually in use as a medium of exchange. Large changes in the quantity of gold in reserves may take place before any effect is felt upon prices. In countries where the law requires a specific ratio of reserves to note issues or to bank deposits it may be held that the influence of changes in reserve gold will begin to act powerfully when the reserves fall to the legal minimum. This is undoubtedly the case. The reaction of a changed reserve stock is likely on such occasions to be much more powerful than the trifling difference in amount between such reserves just before and just after the legal minimum is reached.

Even the rule of legal minimum reserves acts, however, very imperfectly and irregularly. In many minds and under many laws it is connected with the amount of printed bank-notes or government paper; but the experience of the Bank of England in 1847, and many similar incidents, illustrate the inefficiency of laws regulating note issues to control all forms of credit. In the United States a somewhat wider sweep is given to the influence of a minimum reserve law by its extension in the case of national banks to a reserve against deposits as well as against printed notes; but even there the existence of many other types of banks without minimum reserve requirements, and the recognition of government paper, as well as gold, as an element of legal reserves, in-

troduce factors which permit great changes in the volume of gold money held in reserves without any direct influence on the volume of the medium of exchange.[1]

That a great increase in the volume of gold in a community will have an influence tending to raise prices, and a great decrease a contrary effect, is not the subject of dispute. The question is how this influence operates. That it operates under the modern organization of industry without any direct mensuration of the mass of goods in money—either metallic money or the combined sum of such money and paper—is the contention of those who deny the sufficiency of the quantity theory. In the case of reserve gold, just discussed, it is obvious that the question is largely psychological. The esteem value of money operates powerfully upon its exchange value. So long as the manufacturer can exchange his products readily for other products at prices which seem to show a net profit, gold has little esteem value in his eyes. He is almost ready to accept the illusions of the advocates of ideal money and the multiple standard, that trade is wholly barter, in which the intervention of real money is a relic of an outgrown superstition. When the fact is brought home to him, however, that his goods have lost esteem value because of overproduction or for other reasons, and this fall of esteem value in the minds of others finds expression in a lower valuation of his goods in gold, then suddenly rises in his mind the esteem value of real money,—the one common form of value which is

[1] Thus the specie reserves of the New York clearing-house banks stood for the week ending June 25, 1904, at $240,368,300, as against a similar item for the week ending June 27, 1903, of $163,770,200. With this increase of nearly 50 per cent. in specie, loans increased only about 17 per cent. (from $913,746,900 to $1,066,813,200) and deposits about 26 per cent. (from $903,719,800 to $1,143,314,100), while the prices of commodities showed a declining tendency. Net circulation of money per capita throughout the United States increased only from $29.42 on June 30, 1903, to $30.80 on June 30, 1904. These figures go to show that changes in bank reserves do not react promptly and directly upon gold employed as a medium of exchange, and that the movement of prices may be in the opposite direction from that of the amount of bank reserves.

always exchangeable for other forms of goods. He realizes the force of the maxim of Karl Marx, that whether "labor is useful for others, and its product consequently capable of satisfying the wants of others, can be proved only by the act of exchange."[1]

Under such changing conditions it is the relative marginal utility of gold and other commodities which determines the value of each. Mathematical demonstration that the quantity of gold and paper in a country has not fallen will not seriously check the clamor for them by merchants and prompt efforts by bankers to obtain them, even at a considerable sacrifice, when the demand for them increases. Even critical conditions may be relieved, however, without actual additions to the gold stock, by the skilful use of the powers of bankers under the play of the principle of marginal utility. They may have gold credits abroad, against which they can sell drafts, thus utilizing the increased demand for unassailable forms of circulating capital by raising the charges for its use.

The value of money fixed by the discount rate in any market is the index of its marginal utility there. Higher discount rates in another market indicate that money as such has a higher utility there, and they attract it from the market where its utility is small. Low discount rates indicate that money has a low degree of utility in a given market in relation to the supply. It is the surplus on the margin of supply which fixes the rate for the entire stock. When the surplus of a community consists not only of money, but of capital, the transfer of the surplus to another community takes place in goods as well as gold. But there may be a scarcity of money in relation to the demand when there is a surplus of capital, and the rate for permanent loans has not changed. A flurry upon the stock exchange, which creates a sudden demand for money at a high rental value, does not involve

[1] *Capital*, p. 57.

change in the permanent rates for the loan of capital, except so far as the high rate for money may afford the temptation to the capitalist to convert his savings into money instead of keeping them in other forms of capital.[1]

We have seen that the value of money is governed by the principle of demand and supply, but by a somewhat different process from that usually assigned to this principle by the advocates of the quantity theory. The side of demand has been chiefly dealt with, because demand for money is more variable and therefore more influential upon its value, over short intervals at least, than changes in the supply. Changes in the supply of money have an influence, however, which is felt under certain conditions. It might be said of wheat, as it is said of money, that its value varies inversely to the supply, if by this is meant only that an increase in supply tends to diminish the value of the single unit and a decrease in supply tends to increase the value of the unit. But neither in regard to wheat nor in regard to money is there a definite mathematical relation between an increase in demand and a given supply. It is the supply on the margin which tends to fix the price for the entire stock. A slight deficiency in the supply of wheat will send the price up by a large percentage;[2] and likewise a slight deficiency of money will cause a marked advance in rates charged for its use and a fall in the price of securities, which represent the

[1] "If the rate of discount rises, the holders of shares, bonds, stocks, and other interest-bearing securities will find it profitable to employ their money in discounting bills rather than in holding the former. Hence sales will take place, with the result of sending down the prices of securities." Pantaleoni, *Pure Economics*, p. 236.

[2] "The average price of wheat (per quarter) in the decade 1771-80, in which Adam Smith wrote, was 34*s*. 7*d*.; in 1781-90 it was 37*s*. 1*d*.; in 1791-1800 it was 63*s*. 6*d*.; in 1801-10 it was 83*s*. 11*d*." Marshall, p. 254, note. If these great differences are to be ascribed in part to lack of means of transportation, they are nevertheless almost paralleled by the fluctuations of modern times. Thus the average farm price of wheat per bushel in the United States was 50.9 cents in 1895 and 72.6 cents in 1896,—an advance of more than 40 per cent.; but the decline in production was only from 467,102,947 bushels to 427,684,346 bushels, or less than 10 per cent. *Year Book of the Department of Agriculture*, 1899, p. 760.

command of money over the most sensitive form of commodities.

These facts bring into relief the real factor in fixing the relative value of money and all other articles. This factor is the intensity of demand. Intensity of demand is not governed by the rules of arithmetical progression. The man who needs a loaf of bread does not offer to pay a price 10 per cent. higher because the supply has fallen 10 per cent., if that fall reduces the available stock below the amount necessary to feed the community. On the contrary, he stands ready to advance his price by much more than 10 per cent. The value of money as expressed by the discount rate does not vary in mathematical ratio to changes in the supply. It varies more nearly in the ratio of the changes on the margin between plenty and scarcity. If the reserves of the New York banks fall from $200,000,000 to $160,000,000, discount rates do not advance merely by 20 per cent., as from 2 per cent. to 2.40: they tend rather to advance in the ratio of the intensity of demand for money. If reserves in the first case were $20,000,000 in excess of legal requirements, and were reduced in the second case $20,000,000 below legal requirements, rates of discount would be more likely to advance by 100 per cent. (as from 3 to 6 per cent.) than in the mathematical ratio of 20 per cent. Although Walras does not grasp the full significance of his own language, he approximates the true principle of the value of money in these words:[1]—

> That the relations of value or of prices are mathematically equal to the intensities of the last needs satisfied (or of rarities) for each consumer.

Since this rule is of universal application to all commodities (including money), it follows that differing intensities of demand for different articles will affect their

[1] *Études d'Économie Politique Appliquée*, p. 5.

prices in different degrees under changing conditions. A decreasing rarity of money due to an increase of supply (without corresponding increase of demand) will change its relations to other articles; but the new relationship established will conform to the intensity of demand for other articles, and will not leave such articles in exactly the original ratio of value among themselves. The intensity of demand for money, indicated by its relations to other articles, operates upon the supply by diminishing the employment of the metals in the arts when the metals are scarce, thereby increasing the amount available for money, and by increasing their employment in the arts when they are plentiful, thereby diminishing the amount turned into money. At this point, therefore, emerges the influence of cost of production upon the quantity and the exchange value of the precious metals. Cost of production is a factor whose influence in the case of gold is only slightly felt over short intervals, but is none the less real.

If gold is rising in value in proportion to other articles which are in demand, then what is produced will exchange for more of these other articles. Hence will come a stimulus to production up to the point where comparative equilibrium will be restored.[1] Professor Hadley well expresses the truth on the subject when he says that, under a system of free coinage of the standard metal, changes in the quantity of money[2] "are *at once a cause and effect* of changes in the general price level. If we have to choose between two ways of looking at the matter, there is in the majority of cases less error in treating them as an effect than as a cause. The amount of production and coinage of gold is so far affected by changes in the general

[1] "If the amount of gold for which a hat will exchange is less than the amount of gold which could be produced by the work which produced the hat, gold will be produced until an equilibrium is reached." Davenport, *Outlines of Economic Theory*, p. 238.

[2] *Economics*, p. 198.

price level that it tends to adapt the supply of money to the demand and mitigates changes in general prices far oftener than it causes them."

In a rough sense, changes in the volume of money are related to changes in prices of other articles; but, even under conditions as nearly static as is conceivable, the time could never arise when there would be a general change of prices bearing a definite ratio to changes in the volume of money. Changes in the ratio of supply and demand, and, therefore, in the marginal utility of one article in relation to all others, must continually interact upon the demand for gold. The demand for gold would be in some degree the resultant of the interaction of the marginal utility of other articles; but no period of transition, however long, and no system of averaging prices, however complete, could ever demonstrate that the prices of all articles had changed between any two dates in any definite ratio to the stock of gold.

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THE MOVEMENT OF WHEAT-GROWING: A STUDY OF A LEADING STATE.

AMONG the problems that arise in a study of wheat-farming are (1) the cause of the westward movement of wheat-growing and (2) the size of the most economical wheat farm. An attempt will be made in this paper to apply to the above problems the results of a study of a typical wheat State.

The following table indicates the growth of wheat-growing in Minnesota and her rank as a wheat-growing State:—

	Bushels.	*Rank.*
1850	1,401	
1860	2,186,993	
1870	18,866,073	12
1880	34,601,030	9
1890	52,300,247	6
1901	80,102,627	2

Crop failures in Kansas in 1902 gave Minnesota first rank for that year

The growth thus made apparent has not been uniform, however. In 1860 each of the nine leading counties produced above one hundred thousand bushels, as follows:—

	Bushels.
1. Fillmore	391,350
2. Olmstead	232,469
3. Dakota	173,652
4. Winona	166,950
5. Goodhue	152,348
6. Hennepin	135,715
7. Rice	130,433
8. Wabasha	114,227
9. Houston	108,518

The counties mentioned are in the extreme south-east portion of the State, or near the Mississippi River in the region of the twin cities (St. Paul and Minneapolis).

In 1870 the leading wheat counties produced as follows:—

	Bushels.
1. Olmstead	2,117,054
2. Goodhue	1,815,403
3. Fillmore	1,687,424
4. Wabasha	1,476,643
5. Dakota	1,435,361
6. Winona	1,315,012
7. Blue Earth	725,879
8. Mower	673,017
9. Dodge	634,741

It is thus seen that in 1870 the leading wheat counties continued to be practically the same as in the previous decade. Six of the counties were now producing over a million bushels each; while the leading county, Olmstead, containing only 648 square miles of territory, produced over two million bushels, or 3,268 bushels per square mile! This product becomes significant when we notice that thirty years later —in 1900—the two leading wheat-producing counties, Polk and Ottertail, produced only 1,362 and 1,791 bushels per square mile, respectively.

In 1880 conditions within the leading wheat counties remained practically unchanged, though addditional wheat fields, during the intervening years, had been added along the Minnesota River and in the central and north-western parts of the State. While the wheat industry had thus been practically at a standstill in the older counties, the increase in the total output of the State—from 18,866,073 bushels in 1870 to 34,601,030 bushels in 1880—came from new counties into which the industry had been extended.

In 1890 there were twenty-two counties that produced over one million bushels each. Of these the leading ones were Polk, Ottertail, Stearns, Renville, Lac qui Parle, Sibley, Meeker, Blue Earth, and Brown Counties. All of these lie in the western half of the valley of the Minnesota River, or on the plains in the central western part of the State, or in the valley of the Red River of the North.

In the mean time there was a rapid falling off in the older counties, as is indicated in the following table:—

	Product in 1870. Bushels.	Product in 1890. Bushels.
Goodhue	1,815,403	604,327
Fillmore	1,687,424	156,728
Wabasha	1,476,643	305,388
Olmstead	2,117,054	198,992
Dakota	1,435,361	64,806
Winona	1,315,012	466,845
Mower	673,017	108,763
Houston	623,557	129,619
Dodge	634,741	132,900

Coming down to the year 1900, we find that there were forty-two counties producing more than one million bushels each; and, out of these, twelve counties produced more than two million bushels each. The nine leading counties are given below:—

	Bushels
Polk	4,128,620
Ottertail	3,941,120
Renville	3,698,160
Lac qui Parle	3,219,230
Stearns	3,022,230
Clay	2,593,390
Yellow Medicine	2,552,700
Redwood	2,529,620
Marshall	2,225,440

Thus the tendency of the wheat industry to shift northward and westward, as shown in the figures for 1890, is still further emphasized by those for 1900. Figures since 1900 show further movement in this direction. The valley of the Red River of the North, that part of the valley of the Minnesota River north-west from Blue Earth County, together with the plains lying immediately north and in the central western part of the State, accordingly comprise to-day's great wheat-producing areas in Minnesota.

We are now led to inquire why such a shifting of the wheat industry has taken place. The answer to this query is important; for it explains not merely the cause of changes in farming within the confines of the State of Minnesota, but it will also account for that larger movement of the

wheat industry from New York to Ohio and Illinois and thence to the great North-west and the Pacific coast.

If we examine the kind of farming carried on in the south and south-east portions of Minnesota to-day, we will notice that it is highly diversified. Creameries or cheese factories are found in every township. Barley, corn, or hay, is raised in place of wheat; and these products are not sold in the market directly, but are fed to cattle and hogs on the farm. The cattle are not raised primarily for beef, but rather for the milk from which butter and cheese—the direct products for the market—are derived. Meat, hides, etc., from the cattle—so far as they are marketed—serve in reality as a by-product.

Why have these farmers abandoned wheat-raising and taken up dairy-farming? The land is just as fertile here as in any part of the State. Just as many bushels of wheat per acre were raised in Olmstead County in 1870 as can be raised to-day on the best wheat lands of the Red River valley. The land in Olmstead County is as fertile now as it was thirty-five years ago. It is not, therefore, a difference in fertility or adaptability in soil or condition of climate that has caused the change. Neither can it be due to a difference in the contour of the land. The southern and south-eastern counties of the State contain plains upon which modern agricultural machinery can be used as easily as in the Red River region. The cost of agricultural machinery, the price of wheat, the cost of farm labor, and the rate of interest charged on farm loans are all such as to give a relative advantage to the farmers in the south-eastern counties rather than to those further north-west. The cause of the change must, therefore, be sought elsewhere.

When the south-eastern counties of the State were first settled, wheat-growing was the kind of farming adopted. As the settlements were gradually extended northward and westward, each locality in its turn adopted wheat-growing at first. It follows that wheat production was deemed best adapted to the conditions of frontier agriculture.

There are, however, certain localities in Minnesota, not on the frontier, which are nevertheless devoted to wheat-raising. Mention has been made of that part of the valley of the Minnesota River north-west from Blue Earth County. What does this region have in common with that on the frontier that it should be devoted to wheat production, while other localities have changed their mode of farming to that of dairying?

Those who recall J. S. Mill's theory of international exchange, as illustrated by the example of the five islands, will remember that each of his islands produced that in which it had a relative rather than an absolute advantage over the others. Similarly, it is evident that, when a man has a choice between dairy and wheat farming, he will choose whichever makes it possible for him to employ most efficiently the productive forces involved. On the frontier and along the valley of the Minnesota River north-west from Blue Earth County wheat-farming seems to pay better than dairy-farming. In the south-eastern counties, however, wheat cannot be grown profitably, though just as good crops can be grown, with just as little labor, as in the North-west. But, since wheat-growing does not pay so well as dairying, it is evident that no one could afford to use his land for wheat-growing. Even if, as is often the case, the farmer is a successful wheat-grower, but entirely unfitted for dairying, still he could not afford to grow wheat for the reason that the land has become too valuable, because of its adaptability for dairying. He cannot afford to hold the land for wheat-growing when others will offer him what it is worth to them for dairying.

On the frontier the land is more valuable for wheat-farming. Now in either of these two kinds of farming the productive forces involved are land, labor, and capital. The farmer will ordinarily raise the product which, after paying rent to land and interest on the capital invested, leaves the largest amount of value as wages for his own labor. If either rent or interest be lowered, and the value of the total product remains the same, it follows that the

share going to wages will be increased. Accordingly, if land is free or very low in price, as on the frontier, the farmer will have little or nothing to pay as rent. After paying interest on the capital invested, he can retain what is left as wages. Hence, when a man farms where land is free, the aim will be to extend the use of a given amount of labor and capital over a large area, no additional expense being thereby added in the form of rent. The farmer will select the area from which his labor and capital can get the product of the largest total value possible. He will therefore adopt an extensive kind of farming, such as wheat-growing. As soon, however, as the land acquires a value, thus involving a definite expense per acre (regardless of the value of the product), the farmer finds it necessary to direct his farming so as to get a larger return per acre.

Whether the extensive or intensive kind of farming is the more profitable is thus seen to depend, from the standpoint of an individual farmer, upon the price of the land. The rise or fall in the price of the land depends partly upon the use to which it can be devoted. If one man uses a given area for wheat-raising and some one else thinks he can farm the same area more intensively and realize a larger net return per acre, the latter will be in a position to offer a larger price for the land than the former can afford to pay, or to hold it at if he is the owner. In this way the wheat farmer will be "crowded out" from the higher-priced land or he will change to a more intensive kind of farming.

The question may now be asked, If a farmer can make more money by intensive cultivation on high-priced land, why can he not do the same with the more intensive cultivation on cheaper lands, and thus "crowd out" the wheat industry entirely? The answer has already been suggested. The farmer wants to realize as much value as possible. If by raising corn he can cover only 50 acres in a season, while by raising wheat he can handle 200 acres with the same labor and capital, he figures up which will give in return

the largest amount of value over and above expenses, and decides his plan of farming accordingly. Where land is free or reasonably cheap, the more extensive farming will give the largest net returns, and such farming as wheat-raising will pay best.

We thus see that, while the demand for land and therefore its price are determined partly by the use to which it can be devoted and partly by the general social conditions of the time and place, the price of the land in turn helps to determine the kind of farming that is most profitable from the standpoint of the individual farmer. To the individual farmer, wheat is an unprofitable crop in the south-eastern counties of Minnesota, because the land is too high. From the standpoint of society at large it may be said that the land is too high because other crops are more profitable than wheat. It is the individual farmer, however, who has to choose between the extensive or more intensive modes of farming, and whose decision has determined the movement of the wheat industry. We must look at the question from his standpoint, therefore, if we are to appreciate the cause of the movement. The reason why a man adopting the more intensive modes of farming can crowd out the wheat-farmer is that the former can pay a higher price for the land than the latter, because he can grow a more valuable crop than wheat. On the other hand, the reason why the wheat farmer under such conditions moves to the cheaper lands is that the added expense from increased rent on the high-priced land leaves a smaller net return to him than could be realized if the land were cultivated more intensively, while at the same time larger net returns will accrue by taking up cheaper lands.

This cause of the shifting of wheat-farming as applied to the State of Minnesota accounts for the movement of the wheat belt from east to west across the continent. In a general way the wheat belt of thirty years ago has the same advantages over the West that the south-eastern counties of Minnesota have over those of the Red River valley. There are, however, two other conditions that

have given the West a relative advantage over the East for purposes of wheat culture. Some of the Eastern lands had through long usage been deprived of some of their fertility. This, however, had not been carried far enough to affect materially the movement of the wheat industry. More important than this is the fact that Eastern farms were planned for the early kind of wheat-farming, before binders and reapers had effected the economy of wheat production. The farms were, therefore, so small in size that the individual farmer with his limited number of acres could not utilize the later improved machinery to its full capacity. The force of this will be more fully appreciated when viewed in the light of the subsequent discussion on the most economical size for wheat farms.

We have already noticed that Olmstead County raised more wheat to the square mile of its area in 1870 than was done in our leading wheat-raising counties in 1900. This was at a time when the methods were very different from those of to-day. The binder could not be used for practical service before the early seventies. The farmers in Olmstead County and of Minnesota in general had to resort to the reaper and hire men to bind the grain by hand according to the plan of "binding stations." Four men would each have their quarter of the distance around the field in which all the bundles had to be bound for every round made by the reaper. The large amount of labor needed during harvest is, therefore, evident. When the binder first came into use, it was very expensive. Four hundred dollars was the least it could be bought for at that time. Ten years later the price still stood at a high figure. In the latter year (1880) the father of the present writer paid three hundred and fifty dollars for a wooden-framed Plano binder. It will be interesting to compare farming under such conditions with that of later times.

The census reports afford us figures by counties for the number of farms, acres of improved land, total value of farm implements and machinery, total expenditure to farm labor, and also total value of products. The last-

named item is not given as such, but can be made up from figures for live stock and those for the value of products not fed to stock. The following table is made up from the above-mentioned items:—

County.	Value of Implements and Machinery per Acre of Improved Land.	Average Number of Acres of Improved Land in the Average-sized Farm.	Average Expenditure for Labor per Acre of Improved Land.	Total Value of Product per Acre of Improved Land.
Olmstead in 1870	$2.63	84	$2.44	$14.24
Olmstead in 1900	1.69	128	.73	13.94
Polk in 1900	1.62	150	1.29	9.43
Lac qui Parle in 1900 . .	1.42	200	.95	9.72
Renville in 1900	1.42	166	.87	10.28

The kind of farming in Olmstead County in 1870 has already been indicated, also that used in this county in 1900. Figures for Polk, Lac qui Parle, and Renville, are selected, because these were the leading wheat counties in the three main wheat sections of Minnesota in 1900.

We thus have before us three types of farming: first, wheat-raising with the reaper,—as seen in Olmstead County in 1870; second, highly diversified farming for products such as butter, cheese, and pork, as seen in Olmstead County in 1900; and, third, wheat-raising according to modern methods as seen in the counties Polk, Lac qui Parle, and Renville in 1900. The contrast in the value of implements and machinery per acre in 1870 and the values for 1900 is due to the very high prices of farm machinery in 1870. When the binders first came into use, the value of implements and machinery per acre became still greater. Thus the figures for this in Renville County in 1880 were $3.24 per acre. In the comparisons for 1900 the value of implements and machinery per acre is seen to be greatest in Olmstead County. It will be noticed, however, that the average size of farms is the smallest in this county. In the

other counties the same amount of machinery is used on a larger number of acres, and the value per acre is accordingly diminished. For purposes of wheat-farming one set of machinery (one binder, one seeder or drill, one harrow) can do all the work on each of the average-sized farms of the counties referred to above. Where the farms are largest, therefore, and still use "one set," the implements and machinery are used with greatest economy and the value of these per acre becomes least. This explains why the figures for Olmstead County in 1900 are greater than those for Polk County, and also why those of the latter county are larger than those of Lac qui Parle and Renville. The reason why the figures for Lac qui Parle County are not smaller than those of Renville is due to the fact that the farms in the former county are so large that, in a larger number of cases, one set of implements and machinery is not sufficient for the work required. In other words, more than one of some of the implements have to be used for the average farm. As far as the use of capital is concerned, therefore, the figures point to the fact that farms of 160 or 170 acres each are the most economical.

The most economically managed of all wheat farms is that just large enough to utilize one complete set of farm implements and machinery to its fullest capacity. Since one laborer is needed for each set, it follows that in the above plan labor will also be utilized to its fullest capacity. That farm is the best managed and "pays best" on which the labor and capital expended are both thus utilized to their fullest extent. It may be urged that two men and two sets of implements and machinery ought to do just as well and perhaps better on a farm twice as large. They do not, however, for the reason that there is no economy from further organization, since one man with one set of modern farm implements and machinery has all the advantages organization can give. Moreover, when there is just one worker, that worker is in general practice the owner of the farm. Where more than one is needed, resort must be made to hired laborers. The last-named fact is important

in determining why one set is more efficient pro rata than two. The work of an owner is always more careful and less wasteful than that of a hired laborer. The force of this statement can be fully appreciated only by those who have seen the work of the average hired laborer in the harvest field.

Turning our attention now to the average expenditure of labor per acre, we note that the figures for Olmstead County in 1870 are very high. The large amount of labor needed then per acre accounts for this. In the comparisons for 1900 the Olmstead farmer is found to expend less for labor per acre than the farmers of the other counties. His farming, however, is very different from that of the others. His work is largely concerned with stock; and for work of this kind the farmer's wife and children lend, in practice, a very helpful hand. Besides, the work is evenly distributed over the entire year. He gets along with comparatively little hired labor when his farm is of the average size. The wheat farmer, on the other hand, is confronted with certain busy seasons of the year, when a great deal of work must be accomplished in a very limited time. The need of hiring extra labor at such times is obvious. The figures for labor in the three wheat counties are further evidence of the economy of the "one-set" farm of the proper size. It is true that wages per day for hired labor are not the same in the three counties. Thus Renville County is nearest the large cities, and gets labor the cheapest. Polk County is farthest away, and must pay the highest wages. After making due allowance for this, however, the relation still holds, as shown above.

Turning to the total value of the product per acre, we notice that the highest figures are those for Olmstead County in 1870. This was the result of wheat-farming under the reaper régime, and the high figures are due to the exceptionally high price of wheat at that time. The richest farmers in Olmstead County to-day will tell you they got their "start" during those years. Although the value of the product per acre over and above the cost of labor and the

cost of implements and machinery, as determined from the above figures, appears higher in 1900 under diversified farming than in the reaper era under high wheat prices (being \$11.52 per acre for the former and \$9.17 per acre for the latter), notice must be taken of another item of expense not shown in the above table. Reference is made to the wide contrast in the prices of land. This expense was very small in 1870. Now, however, the Olmstead farmer has to pay fifty or sixty dollars an acre for land. (This means with buildings, fences, and other equipment, or total investment necessary to buy a farm.) When rent on this is computed, the advantages of the wheat farmer of 1870 become evident.

We are now in a position to appreciate the meaning of a movement that has taken place in the wheat-farming regions of the North-west during recent years. This is the breaking-up of the bonanza wheat farms. When the experiment on these large farms was first begun, and a long series of machines and implements were put to work on the great plains, the power was so great and the scale of work so large that many believed the most economical method of wheat-farming had been secured, and that farming on a small scale was henceforth doomed to failure. Mere size of industry, however, does not insure efficiency. The latter can only be secured where labor and capital are combined with land in such a way that each is utilized to its full extent. The waste possible in wheat-raising is very great. This fact must be taken into account more and more, as the cost of raising wheat is increased. When land was cheap, the bonanza wheat farmer could let his great caravan of machinery, implements, and labor skim over the plains, and, the more ground they covered, the larger would be the net as well as the gross returns. With a rise in the price of land, however, a new item of expense had to be met, and more value had to be secured from each acre used, if the business was to pay. The bonanza farmer had no way of getting more value from the land per acre. The small farmer, however, could add to the returns by more

careful wheat-farming. He could save waste, and take an owner's interest in the field cultivated.

We thus see that the rise in the price of land, by means of which the diversified farmer crowds out the wheat farmer of southern Minnesota, enables the wheat farmer owning 160 or 170 acres to crowd out the bonanza farmer of the North-west. In either process the movement is toward a kind of farming which produces more per acre. Though the rise in the value of the land is partly the result of the more intensive farming, yet the social and other advantages of a settled community are in themselves powerful factors in increasing this value, and, as already shown, the rise in value in turn forces a more intensive system of farming upon such communities.

The relative advantages of wheat-farming and the more intensive diversified farming can be further compared by means of the following data gathered from the United States census reports of 1900:—

County.	Total Acres of Land in Farms.	Acres of Improved Land in Farms.	Value of Land and Improvements (except Buildings).	Value of Buildings.
Olmstead	405,889	327,419	$13,592,810	$2,684,110
Renville	584,659	500,199	13,563,070	2,358,530

County.	Value of Implements and Machinery.	Value of Live Stock.	Value of Products not fed to Live Stock.	Expenditure for Labor.
Olmstead	$555,160	$2,005,259	$2,559,762	$240,630
Renville	709,490	1,908,030	3,235,004	436,920

From the above tables the following has been compiled:—

County.	Improved Acres in Each Farm.	Total Acres of Each Farm.	Value per Acre of Land in a Farm, taking Total Acres.	Value of Buildings per Acre of Improved Land.
Olmstead	128	159	$33	$8.20
Renville	166	194	23	4.70

County.	Value of Implements and Machinery per Acre of Improved Land.	Value of Live Stock per Acre of Improved Land.	Value of Products not fed to Live Stock per Acre Improved Land.	Expenditure for Labor per Acre of Improved Land.
Olmstead	$1.70	$6.12	$7.81	$.73
Renville	1.40	3.81	6.46	.87

Land in Olmstead County is thus valued half again as high as in Renville County. The cost of buildings, implements and machinery, and live stock per acre in Renville is about five-eighths of that in Olmstead County. The total value of buildings, implements, machinery, and live stock per farm in Olmstead County is $2,050.56. In Renville it is $1,645.06. The average total land value in each average-sized farm in Olmstead is $5,247. In Renville it is $4,462. The total investment in the average-sized Olmstead farm becomes $7,297.56; in Renville, $6,107.06.

Deducting the cost of labor per farm from the value of each farm's yearly product, we have $906.24 as the average income on a farm in Olmstead County, and $927.94 for Renville.

A man with a capital of a little over $7,000 can thus buy an average-sized, fully equipped farm in Olmstead County, and his income will be reasonably certain. He could, however, with $1,000 less, buy a larger farm in Renville County, and get, perhaps, a larger yearly income. This income, however, would not be so certain; moreover, there are certain social disadvantages in living in a new country. A man with sufficient capital, wishing to invest in farm lands where the income is safe from year to year, will prefer Olmstead farms. If, however, one is willing to hazard the risk of steadiness in income for the sake of the probability of a larger yearly return, and at the same time wishes to realize gain from increase in the price of land, preference will undoubtedly be shown for Renville farms. Men who do not own enough capital to buy an Olmstead farm may have enough for a small wheat farm. In this way the poorer farmers tend to settle in the wheat region or on the frontier. All the data presented tend, therefore, to emphasize still further the conclusions already reached.

It remains to be considered whether charges for transportation, alone or with other causes, are of importance in determining which kind of farming is the most profitable. It is true that transportation charges have some effect. Freight charges are higher on a dollar's worth of butter than on a dollar's worth of wheat. If, therefore, all other things are equal, it would pay better to raise wheat than to go into dairying. In the study made of Renville and Olmstead Counties, however, transportation charges cannot be said to have had any influence in determining the kind of farming in the two localities. Renville County has had advantages in transportation that exceed those of Olmstead or Freeborn. All of these counties ship to the large cities. A direct railway line runs through Renville County to St. Paul, and has given this region cheaper transportation than has been accorded the counties further south. If the southern counties were induced to carry on intensive diversified farming because of advantages in transportation, then surely Renville County had a still better reason. The influence of lower transportation charges has been a general one, and has made possible the movement of all industries across the continent. The example of Renville County, however, as compared with the counties further south, indicates clearly that dairying has not been encouraged thereby rather than wheat-farming. It may nevertheless be noted in this connection that, if a new railroad is extended into a certain region, there will be increased demand for the land of the locality and prices of land will go up. If the price of land be raised high enough, so that more intensive farming pays better than wheat-raising, we have a result that can be attributed to changes in transportation. Facilities for transportation have brought about such changes, however, by raising the price of land.

In conclusion, it may be emphasized that with the price of land high enough it is not dairy-farming as such that crowds out wheat-farming, but rather a more intensive that crowds out a less intensive kind of farming.

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NOTES AND MEMORANDA.

REPORT OF THE MEXICAN CURRENCY COMMISSION.

Those who are interested in monetary questions, but whose linguistic range does not include Spanish, will be glad to learn of the appearance in English of the final reports and recommendations of the Mexican monetary commission. The commission was appointed in February, 1903, and included in its *personnel* a representative body of bankers, economists, business men, mine-owners, and men in the public service. At the outset various phases of the problem were assigned for special investigation to a series of four sub-committees, which in time brought in reports advocating a general policy of monetary reform and the stabilization of the Mexican dollar. A fifth subcommittee was then appointed to plan ways and means for carrying the reform into execution; and it is the report of this last committee, with the variant opinions of some of its members, which has recently been translated into English.

With the exception of a single member the committee were unanimous in advocating the suspension of silver coinage upon private account, and the eventual adoption of gold as standard. Upon certain further questions of method, however, there was considerable divergence of opinion. (1) There were different views as to the expediency of immediately creating a gold reserve for the redemption of the silver. Several members advocated such a policy as the most efficacious means for at once securing a given rate of exchange between the silver coins and gold; but the majority were of the opinion that the establishment

of the desired exchange could be attained less brusquely and with less disturbance of business, as it had been attained in British India, by merely closing the mints to the unlimited coinage of silver and allowing the exchange rates to rise on account of the ensuing contraction. (2) As to the opportune moment for commencing the coinage of the new gold currency, there were also varying ideas, the majority inclining to the view that "the coinage of gold should be postponed until the legal parity between that metal and the silver coinage shall have been attained." (3) Again, there was a difference of opinion as to the necessity for creating a new silver coin to take the place of the present Mexican dollar. Some believed that the example of British India might be followed in Mexico, and that the old coins might be continued in circulation, though issued in limited amounts and passing at a higher valuation. The majority, however, held that, if the dollar was to be given an enhanced value in terms of gold, the danger of a back-flow of Mexican dollars from the Orient was so ominous, even though prohibited by law, as to necessitate a change in the design of the dollar piece, and the eventual demonetization of the present coins. They preferred, in other words, the method recently followed in this regard in the Philippines and in the Straits Settlement to that of British India.

In the plan of reform finally agreed upon by a majority of the committee a new silver dollar is proposed, of identical silver content with the present dollar, but of different design. For a limited time, holders of coins at present in circulation would be given the amplest liberty to exchange them at par for the new pieces; but after the expiration of this period the present coins would no longer be exchangeable, and no longer have legal tender power. The government would only issue the new coins in such amounts as might be necessary for the retirement of the coins now current, future issues being made, as in India is the case with the rupee, only in exchange for deposits of gold.

No provision was proposed by the committee for the redemption of the silver dollars in gold, nor for the immediate

issue of gold coins; but a prospective policy was to be announced of eventually making the gold value of the silver dollar approximate its average price during the past decade, and of ultimately issuing a set of gold coins "assimilated" to those of the United States. The plan in general is evidently drawn upon the lines which have been so successfully followed in British India in the establishment of her gold standard, the only conspicuous difference being the substitution in Mexico of a coin of new design for those now current,—a difference of policy apparently necessitated by the exceptional situation of the Mexican dollar as an international coin.

To all of these and other allied questions comprehensive and careful treatment was given by the Mexican commissioners,—a treatment, on the whole, not inferior to that accorded the currency problems of British India by the several Indian currency commissions. The report is therefore well worthy of perusal by those interested in monetary problems. It is translated into English and published by Louis C. Simonds, associate editor of the *Mexican Herald.*

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THE AUTHORSHIP OF THE *BOOK OF HUSBANDRY* AND THE *BOOK OF SURVEYING.*

Whether the judge, Sir Anthony Fitzherbert, or his elder brother John was the author of the two tracts, the *Boke of Husbandrie* and the *Boke of Surveyinge*, both first printed in 1523, does not much concern the economic historian. In either case the value of these important sources for English agrarian history remains practically unaffected. But a note which shall summarize this minor controversy, adding one or two new items, will not be useless.

Professor Skeat, in his positive way, has championed the claims of Sir Anthony,[1] and has been met by the Rev. Reginald Fitzherbert in an article which sets forth at some length the arguments and probabilities in favor of the elder brother.[2] The catalogue of the British Museum apparently inclines to the latter's side, while J. M. Rigg, in the Dictionary of National Biography, warmly espouses the cause of Sir Anthony. The question is not new. Bale in 1557 made Sir Anthony the author.[3] He was followed by Pits, who, however, adds, "quem aliqui fratri ejus Ioanni ascribunt."[4] Burton, the historian of Leicestershire, omits the works on husbandry from his list of Sir Anthony's writings.[5] Wood mentions the doubt as to the authorship.[6] Tanner rests his argument for the judge on a misstatement; namely, that the printer of the *Boke of Surveyinge* gave it the same authorship as the tract on the *Justice of the Peace*, credited to Sir Anthony.[7] Harte opposes the

[1] *Introduction to the Book of Husbandry*, English Dialect Society, 1882.

[2] *Engl. Hist. Rev.*, April, 1897, vol. xii. p. 225.

[3] Bale, *Scriptorum Summarium*, ed. Basel, 1557, p. 710 (not in the edition of 1548.)

[4] Pitseus, *De Illustribus Angliae Scriptoribus*, Paris, 1619, p. 707.

[5] Burton, *Description of Leicestershire*, 1622, p. 235.

[6] Wood, *Athenae Oxonienses*, ed. 1813, i. 110.

[7] Tanner, *Bibliotheca Brit.*, 1748, p. 283.

ascription of the husbandry treatises to Sir Anthony,[1] and is followed in this by Hunter.[2] Watts[3] assigned the works to the legal writer, and adds, as another title of the *Surveying, The Reading on the Statute Extenta Manerii.* Bridgeman[4] had gone further and made of the *Reading* a separate work, and herein is followed by Rigg, who bases on this error an argument for Sir Anthony Fitzherbert.[5]

The known facts as to the authorship are few. (1) The author of the *Surveying* acknowledges in his prologue the authorship of the *Husbandry:* "Of late by experience I contrived, compiled, and made a treatyse for the same poore fermers and tenauntes, and callyd it the booke of Husbandrye." The two books are referred to a common author in the poem prefixed to the *Surveying* of 1523. (2) Thomas Berthelet, the printer, in the colophon to the 1534 edition says the "boke of husbandry" was "compyled sometyme by mayster Fitzherbarde." (3) The author of the *Husbandry* declares in 1523 that he writes from a full agricultural experience as "an householder this XL yeres and more." Berthelet in 1534 rightly took this to mean that "mayster Fitzherbarde" "had exercysed husbandry, with greate experyence, XL yeres." There is no reason to doubt this statement.

Forty years before 1523 takes us back to 1483, the year of Ralph Fitzherbert's will, which definitely constituted the elder son John a householder, and made no mention of Anthony, the sixth son.[6] By the mother's will of 1490, John as eldest son and heir was directed to pay to Anthony five marks a year "towards his exhibition at Court (Gray's Inn), upon condition that he continue his learning at the same."[7] According to the same instrument, Anthony had received no part of his father's goods

1 Harte, *Essays in Husbandry*, 1764, ii. 77.

2 Hunter in Boucher's *Glossary*, ed. 1832, s. v. Big.

3 Watts, *Bibliotheca Brit.*, 1824.

4 Bridgeman, *Legal Bibliography*, 1807, p. 122.

5 *Dict. Nat. Biog.*, vol. xix. p. 169.

6 *Engl. Hist. Rev.*, vol. xii. p. 234.

7 Ibid.

but his "bare finding." Skeat and Rigg, on no sufficient authority, state that Anthony was born in 1470.[1] However this may be, it is clear that in 1490 Anthony was but a stripling, devoting himself in London to the long course of legal training then prescribed[2] and possessing no landed property of his own. When the *Husbandry* was written, therefore, Anthony could not have been a householder for forty years. But John Fitzherbert had been a gentleman farmer for at least that period of time.

In the prefatory verses of 1523[3] Berthelet praises the author for his

> "Hyghe love and zeale
> Whan he so delitethe, and taketh pleasure
> By his busy laboure, mens welth to procure."

In the colophon to the edition of 1534, Berthelet repeats the same praise of his "charytie and good zele that he bare to the weale of this mooste noble realme," but with a significant change from the present to the past tense. This change of tense would correspond with the fact that John Fitzherbert died before 1534,[4] while the date of Sir Anthony's death was not until May 27, 1538.[5]

For Sir Anthony, on the other hand, it has been urged that Berthelet published with his 1539 edition of the *Surveying* the "Boke longyng to a Justice of the Peace,"

[1] Skeat quotes as his source for the birth-date the *Biographia Brit.*, 1750; but I have been unable to trace any authority for the statement. Unfortunately, the Inquisition *post mortem* of the father, Ralph Fitzherbert, which might have thrown some light on this point, is not discoverable at the Record Office.

[2] Douthwaite, W. R., *Gray's Inn*, 1886, p. 35.

[3] Both Skeat and R. H. C. Fitzherbert find in these verses by Berthelet a supposed reference to the author as a nobleman. The lines in question run:—

> "And thus I leave him, in his good wyl and mynd
> That he beareth unto the publyke weale
> Wolde god noblemen, coude in theyr hartes find
> After such fourme, for the commen helthe deale."

But this merely corresponds to the author's statement that after writing the *Husbandry* for "poore fermers and tenauntes" he had written the *Surveying* "to the profytte of all noble men and women."

[4] Inquisition *post mortem*, 28 October, 23 Hen. VIII. He died July 24, 1531.

[5] See inscription on his tomb at Norbury, *Derbyshire Archæological Society Journal*, iv. 53.

which has been currently ascribed to the judge.[1] But there is nothing in Berthelet's statement indicating any identity of authorship. He says that after printing the *Justice of the Peace* and other legal tracts, "I bethought me upon this boke of Surveyinge, compyled somtyme by master Fitzherbarde, how good and howe profytable it is for all states, that be lordes and possessioners of landes, and for the holders or tenauntes of the same landes . . . and also how well it agreeth with the argument of the other small bookes, as court baron, court hundred, and chartuary, I went in hand and printed it in the same volume that the other be, to bynde them al togither." Obviously, his idea was "to bynde them al togither," not as works by the same hand, but as appealing to the same class of readers.

The internal evidence is in this instance not altogether conclusive, but such as it is it points rather to John Fitzherbert than to his busy lawyer brother. There is abundant indication of an exceptional knowledge of practical farming in the *Husbandry*, while the *Surveying* shows a close acquaintance with country affairs. The writer tells us, for example, that for ten or twelve years and more it was his practice to take daily notes in the course of the personal supervision of his farming operations.[2] It does not seem probable that the judge would have had so continuous and intimate a knowledge of agricultural practice. Occupied as he was in legal writing, in the practice of the law and in government employments, he might have had, nevertheless, in accordance with the usage of the time a considerable practical acquaintance with country life. A gentleman had to know something of the law, a lawyer something of estate management.[3] But the *Husbandry* presupposes something more than occasional attention to farming. It seems to have been written by an active, in-

[1] See Miss McArthur's article in *Engl. Hist. Rev.*, April, 1894, vol. ix. 305.

[2] *Husbandry*, ed. Skeat, p. 92. R. H. C. Fitzherbert gives other instances to the point.

[3] Stubbs, *Const. Hist.*, iii. 596: "Every man was to some extent a lawyer." Plummer's Introd. to Fortescue, *On Governance*, p. 35; *Paston Letters*, i. 243, 399. "I suppose lerned men (*i.e.*, counsel) wyll not be easy for to gete be cause of this þesy time of harvest."

telligent, fairly well educated[1] country gentleman, whose main interest was husbandry, rather than by a lawyer to whom agriculture was but a secondary concern.

But Skeat's strongest argument from internal evidence against the claim to authorship of John Fitzherbert, the country gentleman, is the considerable mastery of law evinced by the writer of the *Surveying*. This legal knowledge is undeniable. The treatise is cast in the form of a commentary on the statute *Extenta Manerii*, and the author is evidently familiar with technicalities of pleading, with the minutiæ of tenures, with "gyftes and remainders." He will not, however, burden the pages of his popular manual with learned disquisition, which, he says, "toucheth not my matter that I treate of." For the most part, he is content repeatedly "to remytte all those poyntes to men of lawe, that have knowledge and experyence thereof." His tone is not that of one counting himself a professional lawyer, but that of a gentleman desirous of using his store of legal knowledge to enlighten his country neighbors less learned than himself. To account for this exceptional display of legal lore on the part of John Fitzherbert, it is not necessary to resort to the hypothesis of his lawyer brother's co-operation. There is documentary evidence that John Fitzherbert himself, like many country gentlemen of his day,[2] had a legal training at the Inns of Court. This appears from the proceedings between Humphrey Wells and Sir Anthony Fitzherbert after the death of John Fitzherbert, who by his will of 1517 had made his brother his heir. Wells claimed the inheritance in right of his wife Anne, the daughter of John Fitzherbert's wife Benedicte, a daughter whom John Fitzherbert had repudiated as born out of wedlock. In the suit which grew out of this claim, Sir Anthony related

[1] John Fitzherbert's will (printed by the Rev. J. C. Cox in the *Derbyshire Arch. Soc. Journal*, 1885) refers to his "books of Latin, French and Englishe."

[2] Fortescue's well-known statement as to the legal education of young men of good birth (*De Laudibus Legum Angliae*, c. 49) is supported by Archbishop Laud in a letter of 1633 to the Inns of Court, where he says that "almost all young gentlemen (for some continuance at least) spend part of their time in one or other of the Inns of Court and afterwards ... return to live and govern as Justices of the Peace or otherwise in their several countries." *Cal. S. P. Dom., Charles I.*, vol. vi. pp. xxii and 340.

the unhappy family history of his brother,—a story which is borne out by John Fitzherbert's will. It appears that after his marriage John Fitzherbert left his young wife, and "was send to London to the Innes of the court to lerne the lawez of the realme," remaining away from home for four years.[1] This would satisfactorily explain the source of his legal knowledge, and does away with the only tenable objection, on grounds of internal evidence, to his authorship of the two books in question.

The case for John Fitzherbert as against Sir Anthony is, in my opinion, a fairly good one.

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HOWARD'S *HISTORY OF MATRIMONIAL INSTITUTIONS.*[2]

In the three volumes which constitute this monumental work the learned author has provided the first adequate treatment of the history of human marriage. The field was an open one; for Westermarck's well-known study is confined chiefly to an examination of the forms of primitive marriage, and is not intended to present an historical treatment of the whole field of matrimonial institutions.

While Professor Howard's point of view in writing these volumes has been mainly that of the historian devoting most of his space to the development of marriage and divorce in England and the United States, there is much in his investigations that will appeal to other than purely historical students. Half of the first volume is occupied with a careful and condensed analysis of the literature and theories of early matrimonial institutions. To the beginner, confronted for the first time by the maze of contending theories to which the study of the forms and sig-

[1] P. R. O.; Star Chamber Proc. Hen. VIII., Bdle. 22 No. 159. Further particulars, Ibid., Bdle. 25, No. 19; vol. 15, ff. 90-92.

[2] G. H. Howard, *A History of Matrimonial Institutions.* Chicago University Press, 1904.

nificance of primitive marriage has given rise, this part of the work will prove of inestimable value; nor can the special student fail to profit by the admirable survey of practically the entire literature on this difficult subject. Throughout the whole discussion the author holds a steady and even course. Attempting no new and original survey of the anthropological data, he has sought rather to indicate what have been the real contributions of successive writers to the elucidation of the problems of primitive marriage and what now seems to be the safe middle way between contending views. In the third volume the legal reformer, anxious to remodel our marriage and divorce laws, naturally will turn to those lengthy chapters in which the legislation on these topics for a century and a quarter has been minutely analyzed and digested. And it is with a lively interest that the sociologist will read the concluding chapter wherein the author passes from history to a discussion of present problems of marriage and divorce, and seeks to indicate the respective spheres to be occupied by legislation and education in their solution.

In its wider aspects, Professor Howard's work is significant not simply of that increased interest in the study of social institutions and social forces which, as one result, has led to the introduction of sociological courses in our college curriculums: it is significant also as indicating the possibilities of the historical method in illuminating the problems of the present. Professor Howard has done much to help us to a realization of the truth which he has suggested in his happy adaptation of Freeman's well-known maxim, which might better read: "History is past sociology, and sociology present history." One rises from the perusal of these volumes, bearing, as they do, on every page the marks of wide and painstaking scholarship, more than ever impressed with the necessity of supplementing most of the semi-metaphysical, semi-methodological discussion that to-day passes current as "sociology" with such concrete and descriptive studies as this book presents. The publication in the same month of *A History of Matrimonial Institu-*

tions and of President Hall's remarkable work on *Adolescence* not only reflects high honor on American scholarship, but is a happy augury as well for the future science of sociology.

D. H. WEBSTER.

LA REVUE ÉCONOMIQUE INTERNATIONALE.—Economists in all countries will feel an interest in the establishment of an international publication devoted to economic science, *La Revue Économique Internationale.* Published at Brussels and edited by Pierre Olivier and Léon Hennebicq, the new journal enjoys the patronage of Émile Levasseur of Paris, Gustav Schmoller of Berlin, and Eugene Philippovich of Vienna, of whom Levasseur and Schmoller contribute important articles to the first number. The *Revue* is a monthly publication, and the first three numbers have contained no less than 852 pages. Almost one-half of its space is devoted to what may be called an economic chronology, a review of international economic conditions and a brief discussion of topics of current interest. The contributed articles of the numbers that have thus far appeared deal chiefly with subjects of practical importance, such as the protectionist movement in England, the problem of concentration in industry, and the cotton question. Yet it does not appear that the plan of the journal excludes theoretical papers. The London agent of the *Review* is P. S. King, and the subscription price fifty-six francs.

RECENT PUBLICATIONS UPON ECONOMICS.

Chiefly published or announced since May, 1904.

An asterisk prefixed to a title indicates a second and more detailed notice of a book announced in a previous number.

I. GENERAL WORKS. THEORY AND ITS HISTORY.

Capone (G.). Assaggi di critica de la letteratura economica anglo-italo-tedesca. I. De l' interpretazione dinamica del valore. Mondovi. 1904. 16mo. pp. 75. 2 l. [Worthless.]

Durkheim (É., editor). L'année sociologique. Paris: Felix Alcan. 1904. 8vo. pp. 718. 12.50 fr.

Ely (R. T.) and Wicker (G. R.). Elementary Principles of Economics. New York: Macmillan. 1904. 12mo. pp. 388.
[A manual for high schools.]

Follin (H. L.). La philosophie économique devant la sociologie. Paris: Giard et Brière. 1904. 8vo. pp. 31. 1.50 fr.

Graziani (A.). Istituzioni di economia politica. Turin: Frat. Bocca. 1904. pp. 718. 12 l.
[Gives much attention to the history of economic doctrines.]

Molinari (G. de). The Society of To-morrow. New York: Putnam's. 12mo. pp. xlviii, 230. $1.50.
[A vigorous argument against socialism and militarism.]

Pantaleoni (M.). Scritti vari di economia politica. Milan, Palermo, Naples: Remo Sandron. 1904. 16mo. pp. 532. 4 l.

Seilhac (L. de). Manual populaire d'économie sociale. Paris: Roustan. 1904.

Smith (A.). Wealth of Nations. (Condensed by H. Macpherson.) New York: T. Y. Crowell. 1904. 12mo. pp. 232. $1.00.

In Periodicals.

Berolzheimer (F.). Das Vermögen. Ann. des Deutsch. Reichs, 1904, 6. [Treats of the institution of property in its economic relations.]

Cossa (E.). Di alcune errate interpretazioni dell' ordine economico. Giorn. degli Econ., Feb.

Hasbach. Mit welcher Methode wurden die Gesetze der theoretischen Nationalökonomie gefunden? Jahrb. f. Nat. Oek., March. [Emphasizes the similarity in methods of investigation between the natural sciences and economics. An interesting article.]

Loria (A.). La scienza economica ed i problemi sociali del nostro tempo. Giorn. degli Econ., Dec., 1903.

Sieveking (H.). J. G. Büsch und seine Abhandlung von dem Geldumlauf. Zweiter Aufsatz. Jahrb. f. Gesetzg., 1904, Heft 2.

Spann (O.). Albert Schäffle als Soziologe. Zeits. f. d. ges. Staatsw., 1904, Heft 2.

Tönnies (F.). Ammon's Gesellschaftstheorie. Archiv f. Sozial-

wiss. und Sozialpolitik, Bd. I. [Discusses the force of selection in social evolution, and the relation of Ammon to Darwin.]

WEBER (A.). Die Bedeutung der Volkswirthschaftslehre für die Rechtswissenschaft. Ann. des Deutsch. Reichs, 1904, 6.

II. THE LABOR PROBLEM.

BECHAUX (A.). La réglementation du travail. Paris: V. Lecoffre. 1904. 12mo. pp. 200. 2 fr.

BOUQUET (L.). Le réglementation du travail dans l'industrie. 5e édition entièrement refondue par P. Razous. Paris: Berger-Levrault. 1904. 8vo. pp. 406. 6 fr.

CAPPELLINI (A.). Compendio di legislazione sociale, corredato da osservazioni e notizie bibliografiche, con richiamo alle fonti e agli articoli di legge. Milan. 1904. 8vo. pp. 96. 1.50 l.

COTELLE (T.). Le "sweating system": étude sociale. Angers: Sirandeau. 1904. 18mo. pp. 288.

GILMAN (N. P.). Methods of Industrial Peace. Houghton, Mifflin & Co. $1.60.

GLADDEN (W., et al.). Organized Labor and Capital. Philadelphia: G. W. Jacobs & Co. 1904.

HORSFAL (T. C.). The Improvement of the Dwellings and Surroundings of the People: The Example of Germany. Manchester: University Press. 1904. 8vo. pp. 193. 1s.

HUBERT-VALLEROUX (P.). Le droit de grève dans les législations française, belge, hollandaise, et anglaise. Paris: Rousseau. 1904. 8vo. pp. 40. 2.50 fr.

KRAUS (L.). Kinderarbeit u. Kinderschutz in Oesterreich. Wien: F. Deuticke. 1904. 8vo. pp. vi, 203. 4.20 m.

LINDEMANN (H.). Arbeiterpolitik u. Wirthschaftspflege in der deutschen Städteverwaltung. Stuttgart: J. H. W. Dietz. 1904. 8vo. pp. xii, 873. 16.50 m.

LORENZONI (G.). I lavoratori delle risaie: inchiesta sulle condizioni del lavoro nelle risaie della Lomellina, del Vercellese, e del Novarese, compiuta dall' ufficio nell' estate del 1903. Pt. I. Milan: Ufficio del lavoro. 1904. 8vo. pp. 182.

[A careful study of the condition of the workers in the rice-fields of Northern Italy. For a brief summary of results, see Riforma Soc., April.]

MABILLEAU (L.). La mutualité française. Paris: Roustan. 1904. 18mo. pp. 202. 2.65 fr.

MARR (T. R.). Housing Conditions in Manchester and Salford. Manchester: University Press. 1904. 8vo. pp. 114. 1s.

MASSÉ (D.). Législation du travail et lois ouvrières. Paris: Berger-Levrault. 1904. 8vo. pp. 986. 15 fr.

NOGUÈRES (H.). La situation des gens de mers. Victimes des risques de leur profession. Paris: Giard et Brière. 1904. 8vo. 6 fr.

SALMON (C.) et LEBLANC (L.). Loi russe du 15 Juin, 1903, sur les accidents du travail. Traduction et exposé analytique de la loi. Paris: Larose. 1904. 8vo. pp. 54. 4 fr.

SENCHET (E.). Liberté du travail et solidarité vitale. Paris: Giard et Brière. 1904. 8vo. 5 fr.

SIEGFRIED (A.). La démocratie en Nouvelle-Zélande. Paris: Colin. 1904. 8vo. pp. 360. 4 fr.

[A valuable study of political, economic, and social conditions in New Zealand, with especial reference to the undertakings of the Seddon ministry.]

STEFFEN (G. F.). Studien zur Geschichte der englischen Lohnarbeiter. Stuttgart: Hobbing u. Büchle. 1904. 8vo. pp. vi, 337. 6.50 m.

[A German translation of an interesting Swedish work.]

VERMESCH (A.). Manuel social. La législation et les œuvres en Belgique. Paris: Giard et Brière. 1904. 8vo. 12.50 fr.

WAGNER (M.). Beiträge zur Frage der Arbeitslosenfürsorge in Deutschland. Berlin: A. Troschel. 1904. 8vo. pp. iii, 95. 2 m.

WARNE (F. J.). The Slav Invasion and the Mine Workers. Philadelphia: J. P. Lippincott Co. 1904. 12mo. pp. 211. $1.00.

[An interesting study of the problems arising from the influx of Slavs into the anthracite region. Much attention is given to the strike of 1902.]

UNSIGNED. Die deutsche Arbeitsversicherung als soziale Einrichtung. 4 Thle. Berlin: A. Asher. 1904. 8vo.

[A series of publications prepared for the St. Louis Exposition.]

——. Le travail de nuit des femmes dans l'industries. Jena, Germany: Gustav Fischer. 1903. pp. 384. 7.50 fr.

[Translation of a useful German investigation.]

——. Trade Unionism and British Industry. A reprint of the *Times* articles on the Crisis in British Industry, with an Introduction by Edwin A Pratt. New York: E. P. Dutton & Co. 1904. pp. 244. $1.50.

In Periodicals.

BÖDIKER (T.). Die Fortschritte der deutschen Arbeiterversicherung in den letzten 15 Jahren. Jahrb. f. Gesetzg., 1904, Heft 2. [An optimistic account.]

CRONER (J.). Streik und Aussperrung der Metallarbeiter in Berlin. Jahrb. f. Nat. Oek., March. [Brief description of an interesting but unsuccessful strike.]

EBERSTADT (R.). Der Entwurf eines preuss. Wohnungsgesetzes, u. s. w. Archiv f. Sozialwiss. und Sozialpolitik, Bd. I. [With plans of improved dwellings and history of legislation for improved housing.]

FARNUM (H. W.). The Psychology of German Workmen's Insurance. Yale Rev., May. [A means of placating the socialistic parties.]

JOHNSON (S. G.). The Housing Question. Econ. Rev., April. ["I cannot for the life of me see why the food which is supplied to us should be under a series of very strict enactments, so that the vender of bad food is liable to be severely punished, while the owner of a house which is unfit for human habitation should not be treated in the same way."]

MASON (F. B.). The Principle of "Justum Pretium" for Labor. Econ. Rev., April. [Argues in favor of the principle, but does not state what is to be done for that labor which is not worth the "Justum Pretium."]

PHILLIPS (J. B.). Organization of Employers and Employees. Bank. Mag., N.Y., May.

PINKUS (N.). Das neue russische Artelgesetz. Jahrb. f. Nat. Oek., March. [A well-informed and critical sketch of the provisions of the impertant law of 1902.]

——. Workmen's Insurance in Germany, II. Yale Rev., May. [Summarizes various discussions and political movements.]

ROBBINS (H.). The New York Building Trades Paralysis of 1903. Amer. Journ. Sociol., May. [Shows how the "Sam. Park's spirit" still dominates the New York building trades.]

ROBERTS (P.). The Employment of Girls in the Textile Industries of Pennsylvania. Annals Amer. Acad., May. [Urges the need of greater restriction.]

SCHOOLING (J. H.). Strikes and Lockouts, 1892–1901. Fort. Rev., May.

WALLING (W. E.). Can Labor Unions be Destroyed? World's Work, May.

WARNE (F. J.). The Union Movement among Coal Mine Workers. Bulletin U.S. Dept. Labor, March. [Outlining the growth of organization in this field.]

YARROS (Victor S.). The Labor Question and the Social Problem. Amer. Journ. Sociol., May. [Insists that the labor question is simply one part of the broader question as to the type of industrial organization under which we are to live.]

ZAGRIATSKOFF (M.). L'exposition municipale à Dresde. Rev. d'Econ. Pol., May.

III. SOCIALISM.

BASCH (M.). L'individualisme anarchiste. Paris: Alcan. 1904. 8vo. 6 fr.

BOURGUIN (Maurice). Les systèmes socialistes et l'évolution économique. Paris: Armand Colin. 8vo. pp. 519. 10 fr.
[In the main an examination of the "chief currents of contemporary society; capitalism and its causes; the organization of collective forces; the combination or opposition of these two tendencies."]

FIDAO (J. E.). Le droit des humbles. Paris: Perrin. 1904. 16mo. 3.50 fr.
[A study of Saint-Simon, the Saint-Simonians, Lamartine, Comte, and Buchez.]

GINISTRELLI (E.). Da Robert Owen a Karl Marx e il socialismo in Italia. Naples. 1903. 16mo. pp. 62. 2.50 l.

LABRIOLA (A.). Riforme e rivoluzione sociale: la crisi pratica del partito socialista. Milan. 1904. 16mo. pp. 259. 2.50 l.

MARX (K.). A Contribution to the Critique of Political Economy. Translated by N. I. Stone. New York: International Library Publication Co. 1904. $1.50.
[A valuable addition to the library of the English student of socialism. A careful and intelligent translation.]

NAQUET (A.). L'anarchie et le collectivisme. Paris: Sansot. 1904. 18mo. 3.50 fr.

THOMPSON (W.) Untersuchung über die Grundsätze der Vertheilung des Reichtums. Berlin: R. L. Präger. 1904. 8vo. pp. vii, 555. 7.50 m.
[A German translation of this important work. It contains a valuable history of socialistic thought in England by Professor Foxwell.]

In Periodicals.

HALL (T. C.). Socialism as a Rival of Organized Christianity. No. Amer. Rev., June. [A striking article.]

KANTOROWICZ (H. U.). Zur Theorie des Sozialliberalismus. Jahrb. f. Gesetzg., 1904, Heft 2. [A sympathetic criticism of Oppenheimer's *Grundgesetz der Marxschen Gesellschaftslehre.* 1903.]

LOUIS-JARAY (G.). Le socialisme municipal en Italie. La loi de Mars, 1903. Ann. des Sci. Pol., May.

METIN (A.). Deux aspects du mouvement social en Italie. Mus. Soc., March. [Upon the municipalization of water, gas, electricity, and other enterprises, and upon the trade-union movement in Italy.]

SIMONS (A. M.). Socialism and the Socialist Movement. Intern. Soc. Rev., June. [An article prepared for the Encyclopædia Americana.]

IV. LAND AND AGRARIAN PROBLEMS.

BAROIS (J.). Les irrigations en Égypte. Paris: Béranger. 1904. 30 fr.

BERNARD (Fr.). Congrès des caisses de crédit agricole mutuel, tenu à Montpellier en Janvier, 1904. Compte rendu contenant les rapports et les discussions. Paris: Masson. 1904. 8vo. 5 fr.

DOUILHET (R.). L'agriculture et le problème du crédit agricole en France. Bordeaux: Gonnouilhon. 1904. 8vo. pp. 200.

KATZ (E.). Landarbeiter u. Landwirthschaft in Oberhessen. Stuttgart: J. G. Cotta. 1904. 8vo. pp. xvi, 184. 4 m.

LACOMBE (E.). Le régime économique de la sériculture. Paris: Rousseau. 1904. 8vo. pp. 218. 5 fr.

MARCILLAC (M. de). L'assurance mutuelle du bétail. Paris: Rousseau. 1904. 8vo. pp. 152. 2.50 fr.

MORENOS (D. Levi). Lavoro e proprietà del suolo acqueo. Turin: Frat. Bocca. 1904.

PHILIPPOVICH (E. von). La politique agraire. Avec préface de A. Souchon. Paris: Giard et Brière. 1904. 8vo. pp. 343. 6 fr. [Translation of a part of the author's *Grundriss der politischen Oekonomie.*]

PRATT (E. A.). The Organization of Agriculture. New York: E. P. Dutton & Co. 8vo. pp. 408. $2.00.

QUARINI (E.). L'électricité agricole. Paris: Fischbocher. 1904. 16mo. pp. 162. 3 fr. [Discusses the various uses of electricity in agriculture.]

STREETER (J. W.). The Fat of the Land: The Story of an American Farm. New York: Macmillan. $1.50.

In Periodicals.

ALFOSSA (G.). Quarante ans de propriété collective. Paysans russes. Ann. des Sci. Pol., Jan., May. [A rather favorable account of the Russian mir.]

HEISS (C.). Eine theoretische Würdigung des landwirtschaftlichen Genossenschaftswesens in Deutschland. Jahrb. f. Gesetzg., 1904, Heft 2. [A résumé of Lorenzoni's *Cooperazione agraria.*]

LORIN (H.). Le métayage par familles françaises en Tunisie. Mus. Soc., May.

SOUCHON (A.). L'agriculture anglaise et le protectionnisme. Rev. d'Écon. Pol., April.

V. POPULATION AND MIGRATION.

MAYR (A.). Untersuchungen über die Agglomerationsverhältnisse der Bevölkerung im Königr. Bayern. München: E. Reinhard. 1904. 8vo. pp. 87. 5 m.

In Periodicals.

CHIAP (G.). L' emigrazione dal Friuli. Riforma Soc., May. [Examines the direction, character, and consequences of the "temporary" emigration from Friuli.]

McLAUGHLIN (A.). Immigration. Pop. Sci. Monthly, June. [Analyzes the causes of immigration.]

MARCHETTI (L.). L' emigrazione italiana in Francia e i nuovi pericoli che la sovrastano. Giorn. degli Econ., Feb., 1904.

VI. TRANSPORTATION.

ROSS (H. M.). English Railways: Their Organization and Management. London: Arnold. 1904. 8vo. pp. 245. 5s.

SAUVAGE. Le Transsibérien. Paris: Chapelot. 1904. 8vo. 2 fr. [A traveller's notes.]

SEIDLER (E.). Die Eisenbahntarife in ihren Beziehungen zur Handelspolitik. Leipzig: Duncker u. Humblot. 1904. 8vo. pp. vi, 189. 3.60 m.

In Periodicals.

GIBB (G. S.). English and American Rates. Railroad Gazette, May 27. ["English rates for the quantities in which traders usually consign their traffic, etc., are lower than similar American rates."]

MORRIS (R.). Trolley Competition with the Railroads. Atlantic Monthly, June.

PROUTY (C. A.). Railway Rates and the Merger Decision. No. Amer. Rev., June. ["This decision leaves the question of regulating railway charges exactly where it has been. . . . Railway regulation . . . can never be secured by enforced competition."]

UNSIGNED. Die Eisenbahnen der Erde. Archiv f. Eisenb., May-June. [A careful statistical summary, bringing previous compilations up to date.]

VII. FOREIGN TRADE AND COLONIZATION.

AVEBURY (Lord). Free Trade. London: Macmillan. 1904. 8vo. pp. 164. 5s.
[In favor of free trade.]

BAJKIĆ (W. J.). Die französische Handelspolitik 1892–1902. Stuttgart: J. G. Cotta. 1904. 8vo. pp. xvi, 498. 10 m.

DAWSON (W. H.). Protection in Germany. London: P. S. King & Son. 1904. 12mo. pp. 259. 3s. 6d.
[A useful discussion by a competent writer.]

HUBERT (L.). Politique africaine. La question marocaine. L'outillage économique de l'Afrique occidentale française. Paris: Dujarrie. 1904. 18mo. 3.50 fr.

LEFEBVRE (A.). La création de l'outillage public dans l'Afrique occidentale française. Paris: Rousseau. 1904. 8vo. pp. 416. 7.50 fr.

Low (A. M.). Protection in the United States. London: P. S. King & Son. 12mo. pp. 167. 3s. 6d.
[Contains poor history and worse argument.]

McGOUN. A Revenue Tariff within the Empire. Montreal: Lovell. 8vo. pp. 76. 50 cts.

MUSSET (G.). Les ports francs. Paris: Leroux. 1904 8vo. pp. 121.

NICHOLSON (J. S.). The Tariff Question, with Special Reference to Wages and Employment. New York: Macmillan. 1904.

PARKER (M.). Les pêcheurs bretons en Tunisie. Un essai de colonisation maritime. Paris: 37 Rue Barbet-de-Jorey. 1904. 18mo. pp. 121. 2 fr.

REMY (V.). Études sur les ports francs. Paris: Rousseau. 1904. 8vo. 3 fr.

SABBATINI (L.). Esportazioni italiane nell' Europa centrale. Turin: Frat. Bocca. 1904. pp. 716. 12 l.
[The author is secretary of the union of Chambers of Commerce, and discusses Italy's commercial relations with reference to the renewal of the commercial treaties with Switzerland, Germany, and Austria.]

In Periodicals.

DE MARCO (A. DE VITI). Polemica d' un "Protezionista Tranquillo." Giorn. degli Econ., Nov., 1903. [A free-trade argument, attacking the Protectionist party of Northern Italy.]

GARVIN (J. L.). The Principles of Constructive Economics as Applied to the Maintenance of Empire. Nat. Rev., May.

MONTEMARTINI (G.). Colonizzazione libera e colonizzazione protetta. Giorn. degli Econ., Feb., 1904.

NITZSCHE (M.). Die internationalen Ursachen der modernen Schutzzollbewegung. Zeits. f. d. ges. Staatsw., 1904, Heft 2.

PALGRAVE (R. H. I.). An Enquiry into the Economic Condition of the Country. Journ. Inst. Bank., April.

PRICE (L. L.). An Economic View of Mr. Chamberlain's Proposals. Econ. Rev., April. [Minimizes the dangers.]

STRACHEY (J. S. L.). Free Trade the Foundation of Empire. Monthly Rev., June.

WOLFF (H. W.). Protection and Social Reform. Econ. Rev., April. [Cites German experience in support of the proposition that social reform is impossible under an unwise economic policy.]

UNSIGNED. The British Mercantile Marine. Quart. Rev., April.

———. Preferential Duties and Colonial Trade. Edinburgh Rev., April.

———. Imperialismo, protezionismo, e liberismo in Inghilterra. Giorn. degli Econ., Nov., 1903, Jan., Feb., 1904.

VIII. MONEY, BANKING AND EXCHANGE.

ANDREADES (A.). Histoire de la Banque d'Angleterre. Paris: A. Rousseau. 1904. 8vo. 2 vols. pp. 668. 18 fr.
[A thorough and systematic history.]

ANGERHAUSEN (E.). Die Zentralnotenbankfrage in der Schweiz. Krefeld: W. Greven. 1904. 8vo. pp. iv, 141. 2 m.

CELLERIER (L.). Le change sur l'étranger et la régime monétaire suisse. Geneva: Glorg et Cie. 1904. 8vo. pp. 61.

MELIOT (M. et A.). Dictionnaire financier international. Théorique et pratique. Nouvelle édition mise à jour. Paris: Berger-Levrault. 1904. 8vo. pp. 956. 15 fr.
[Treats of money, bonds, stock companies, taxes, etc.]

NOGARO (B.). Le rôle de la monnaie dans le commerce international et la théorie quantitative. Paris: V. Giard et E. Brière. 1904. 8vo. pp. 210.
[A criticism of the quantity theory and its application in the explanation of the theory of international trade.]

POMMIER (L.). La Banque de France et l'état au XIX^{e} siècle. Paris: Rousseau. 1904. 8vo. pp. 485. 10 fr.

WRIGHT (T.). The Twentieth Century Money Law. New York: Peter Eckler. 1904.

UNSIGNED. National Bank Organization. New York: National City Bank. 1904.
[A manual which contains full particulars of the official forms, etc., required in forming a new bank.]

In Periodicals.

CONANT (C. A.). The Foreign Exchanges. Bank Mag., N.Y., June. [Very general in character.]

GILMAN (T.). Our Democratic Banking System and its Natural Ally, the Clearing House. Bank Mag., N.Y., June.

LESSING (H.). Die Organisation der Bank von Frankreich. Ann. des Deutsch. Reichs, 1904, 1905. [Purely descriptive.]

RIEDL (R.). Die Währungsreform in Oesterreich-Ungarn. Jahrb. f. Gesetzg., 1904, Heft 2.

ROZENRAAD (C.). The International Money Market. Journ. Inst. Bank., May.

SOMBART (W.). Versuch einer Systematik der Wirthschaftskrisen. Archiv f. Sozialwiss. und Sozialpolitik, Bd. I. [Propounds a classification of crises founded on economic theory.]

STRAKER (F.). The Daily Money Article. Journ. Inst. Bank., Feb.–May. [Four lectures which give much information concerning the London money market.]

WARSCHAUER (O.). Das Depositenbankwesen in Deutschland mit besonderer Berücksichtigung der Spareinlagen. Jahrb. f. Nat. Oek., April.

IX. FINANCE AND TAXATION.

NEYMARCK (A.). Finances contemporaines. Tome II. Les budgets 1872-1903. Paris: Guillaumin. 1904. 8vo. pp. 592. 8 fr.

NITTI (F. S.). Principes de la science des finances. Paris: Giard et Brière. 1904. 8vo. pp. 749. 12 fr.
[The Italian original appeared in 1903. This translation makes more accessible a work of real value.]

TIVARONI (J.). Le imposte dirette sulla ricchezza mobiliare e sul reddito: storia, analisi, riforma. Turin, Rome: Roux e Viarengo. 1904. 8vo. pp. 176. 3 l.

WILCOX (D. F.). The American City: A Problem in Democracy. New York: Macmillan. 12mo. pp. 423. $1.25.
[A useful discussion of American municipal problems. Devotes two chapters to municipal finance.]

UNSIGNED. Primo trattato completo di diritto amministrativo italiano. Ed. V. E. Orlando. Vol. IX. Milan: Società Editrice Libraria. 1904. pp. xxv, 1499. 32 l.
[This volume is devoted to the public finance of Italy, and contains exhaustive monographs by Ricca-Salerno, Graziani, Vanni, and others.]

In Periodicals.

BOUCARD (M.). Le contrôle financier au parlement. Rev. de Sci. et de Lég. Fin., 2, 1. [An excellent discussion of financial control in France.]

BRANZOLI-ZAPPI (E.). La questione finanziaria della capitale. Giorn. degli Econ., Dec., 1903. [An examination of the financial budget of Rome.]

DANIELS (W. M.). The Ethics of Taxation. Atlantic Monthly, June.

DIECK (H.). Fiskalität und Bureaukratismus. Jahrb. f. Nat. Oek., March. [Urges a reformed system of accounting, which he holds responsible for many of the abuses of German bureaucracy.]

ELTZBACHER (O.). Japan's Financial Position. Nineteenth Cent., April. [A favorable view of Japan's industrial and commercial progress.]

PRATO (G.). Il giappone finanziario ed economico. Riforma Soc., April.

SCHIEMANN (T.). Die Finanzpolitik Wyschnegradskis und Wittes und die gegenwärtige wirtschaftliche Lage Russlands. Jahrb. f. Gesetzg., 1904, Heft 2. [Emphasizes the political motive of Russian financial policy.]

UNSIGNED. The Reform of Taxation. Indep. Rev., June. [A comprehensive survey of British imperial and local taxation.]

X. CAPITAL AND ITS ORGANIZATION: COMBINATIONS.

HIRSCH (K.). Zur Kartellfrage. Jena: G. Fischer. 1904. 8vo. pp. 325. .80 m.

HORACK (F. E.). The Organization and Control of Industrial Corporations. Philadelphia: C. F. Taylor. 1904.

LAUR (F.). L'accaparement. La concentration industrielle en France. Tome III. Paris: L. Loudier. 1904. 8vo. pp. 504. 7.50 fr.

RICHIE (H. C.). Trusts *vs.* The Public Welfare. New York: R. F. Fenno & Co. 12mo. pp. 232. 50 cts.
[Of slight value.]

ROUSSEL (E.). Science de la Bourse. Manuel de spéculateur et du capitaliste. Paris: Guillaumin. 1904. 18mo. 3 fr.

In Periodicals.

ADAMS (A. D.). Legal Monopoly. Pol. Sci. Quart., June. [Shows that all industrial monopolies are, in reality, the creatures of law.]

ATKINSON (Mabel). Trusts and Trade Unions, and their Mutual Relations. Pol. Sci. Quart., June. [Finds that, "in a section of the industrial world, the trade unions, by fixing a definite level of labor cost, make combination among the capitalists easier," but, in another section, the combination of capitalists makes the organization of labor more difficult.]

CADOUX (G.). Le projet d'exploitation du gaz en régie directe à Paris. Rev. de Sci. et de Lég. Fin., 2, 1. [Finds chief obstacles in the attitude of the employees of the gas works and of the consumers of gas.]

CASSOLA (C.). La recente fase del movimento sindicale Americano. Riforma Soc., May. [On the breaking of the bubble trusts.]

GIRETTI (E.). La Società di Terni, il governo ed il "Trust" metallurgico. Part II. Giorn. degli Econ., Nov., 1903.

GLIER (L.). Die Preisbewegung in Drahtproduktion und Feinblechen

in den Vereinigten Staaten während der letzten Jahre. Jahrb. f. Nat. Oek., March. [Indicating a tendency, under trust control, toward reduction in prices.]

LANDMANN (R. von). Die amtlichen Erhebungen über das deutsche Kartellwesen. Ann. des Deutsch. Reichs, 1904, 4. [Conclusion of a series of articles.]

LIEFMANN (R.). Die Verhandlungen über die Roheisensyndikate und den Halbzeugverband in der deutschen Kartellenquete. Jahrb. f. Nat. Oek., April. [A summary of the proceedings of the Kartell commission (Nov. 30 to Dec 31, 1903).]

PANTALEONI (M.). Alcune osservazioni sui sindicati e sulle leghe (a proposito di una memoria del Professor Menzel). Giorn. degli Econ., Dec., 1903. [Continued from the April number.]

WHITNEY (E. B.). Anti-trust Remedies under the Northern Securities Decision. Yale Rev., May. ["If the nation desires to break up these combinations, the remedy is plain. . . . It can provide that (after a reasonable time in which to unload present holdings) no company engaged in transportation shall engage in any agricultural, mining, or manufacturing industry. . . . No corporation can hold more than a given proportion of the stock of any corporation engaged in interstate or foreign transportation."]

XI. ECONOMIC HISTORY.

MAREZ (G. des). L' organisation du travail à Bruxelles au XV^{e} siècle. Brussels: Lamertin. 1904. 8vo. pp. 520.

MASSA (T.). Le consuetudini della città di Bari: studî e ricerche. (Commissione provinciale di archæologia e storia patria.) Trani. 1903. 8vo. pp. 314. 5 l.

MIGLIOLI (G.). Le corporazioni cremonensi d' arti e mestieri nella legislazione statutaria del medio evo: studio storico-giuridico, con prefazione del Prof. F. Brandileone sugli studî di storia economica in Italia. Verona, Padua: Frat. Drucker. 1904. 8vo. pp. 201. 5 l.

SAVINE (A.). The English Village of the Tudor Period. (In Russian.) Moscow: 1903. 8vo.

[A valuable and thorough piece of work. Especial attention is given to copyhold tenure.]

UNSIGNED. Statuto del secolo XIII del comune di Ravenna, pubblicato di nuovo con correzioni, indice, e note da Andrea Zoli e da Silvio Bernicoli. Ravenna. 1904. 4to. pp. 222.

In Periodicals.

ESPINAS (G.). Jehan Boine Broke, bourgeois et drapier douaisien. Vierteljahrschrift f. Soc. u. Wirtschaftsgesch., 1904, Heft 1, 2. [A minute examination of a few documents bearing on the industrial and social history of Flanders at the beginning of the 14th century.]

EULENBURG (F.). Drei Jahrhunderte städtischen Gewerbewesens. Zur Gewerbestatistik Alt-Breslaus 1470–1790. Vierteljahrschrift f. Soc. u. Wirtschaftsgesch., 1904, Heft 2. [An important contribution to gild history.]

GROSCH (G.). Geldgeschäfte hansischer Kaufleute mit englischen Königen im 13. und 14. Jahrhundert. Arch. f. Kulturgesch, 1904, Heft 2. [The first instalment of an interesting study.]

KOVALEWSKY (M.). Les sources et la littérature de l'histoire sociale de l'Angleterre, au moyen âge et à l'époque de la Renaissance. Rev. de Droit International, 1904, No. 2. [A flimsy article.]

SAGNAC (P.). La division du sol pendant la Révolution et ses conséquences. Rev. d'Hist. Mod., April.

SCHMIDT (C.). L'industrie dans le Grand-Duché de Berg en 1810. Addition au Mémoires de Beugnot. Rev. d'Hist. Mod., May.

Sieveking (H.). Die mittelalterliche Stadt. Ein Beitrag zur Theorie der Wirtschaftsgeschichte. Vierteljahrschrift f. Soc. u. Wirtschaftsgesch., 1904, Heft 2. [A critical summary of recent investigations animated by a wholesome mistrust of logically attractive "economic stages."]

Strickler (J.). Das schweizerische Münzwesen im Uebergang vom 18. zum 19. Jahrhundert. Vierteljahrschrift f. Soc. u. Wirtschaftsgesch., 1904, Heft 1, 2.

Thibault (F.). L'impôt direct et la propriété foncière dans le royaume des Lombards. Nouv. Rev. Hist. de Droit Français et Étranger, 1904, Nos. 1, 2.

Whitwell (G. J.). English Monasteries and the Wool Trade in the Thirteenth Century. Vierteljahrschrift f. Soc. u. Wirtschaftsgesch., 1904, Heft 1.

XII. DESCRIPTION OF INDUSTRIES AND RESOURCES.

Aubin (E.). Le Maroc d'aujourd'hui. Paris: Colin. 1904. 18mo. pp. 500. 5 fr.

Blancan (A.). La crise de la Guadeloupe, ses causes, ses remèdes. Paris: Rousseau. 1904. 8vo. pp. 206.

Block (S.). Die Entwickelungstendenzen u. Betriebsformen im Tuchhandel der Stadt Zürich. Zürich: E. Rascher. 1904. 8vo. pp. vii, 129. 5.20 m.

Geering (T.) et Hotz (R.). Économie politique de la Suisse. Traduit de l'allemand par E. Renck. Zürich. 1903. 8vo. pp. 172.

[A manual of the commercial geography of Switzerland.]

Gossin (Ch.). L'empire d'Annam. Paris: Perrin. 1904. 8vo. 5 fr.

Jeans (J. S.). Canada's Resources and Possibilities. London: British Iron Association. 1904. 8vo. pp. 298. 15s.

[Especially in the iron and allied industries.]

Kitchin (P. H.). The Principles and Finance of Fire Insurance. London: Wilson. 1904. 8vo. pp. 253. 6s.

[London School of Economics Lectures.]

Michant (A.). L'industrie aurifère au Transvaal. Son passé, son avenir. Paris: Lahore. 1904. 6 fr.

Prost (Eng.). La Belgique agricole, industrielle, et commerciale. Paris: Béranger. 1994. 8vo. pp. 343. 7.50 fr.

In Periodicals.

Cabiati (A.). L' economia nell' arte. Riforma Soc., May. [Based on a recent book by Osimo; discusses the characteristic industrial form of the artistic industries.]

Eltzbacher (O.). The Chemical Industry of Germany. Contemp. Rev., May.

Politie (N.). L'union internationale des sucres. Rev. de Sci. et de Lég. Fin., 2, 1. [Discusses the bureau and commission established by the Brussels convention of 1902.]

XIII. STATISTICAL THEORY AND PRACTICE.

Claasen (W.). Die soziale Berufsgliederung des deutschen Volkes nach Nahrungsquellen u. Familien. Leipzig: Duncker u. Humblot. 1904. 8vo. pp. xv, 164. 4.40 m.

In Periodicals.

Benini (R.). Gli aspetti arbitrari dell' interpolazione delle serie statistiche. Giorn. degli Econ., Jan., 1904.

Coletti (F.). Le comparazione nelle statistiche del commercio internazionale e le variazioni del valore monetario. Giorn. degli Econ., Feb., 1904.

Fountain. Index Numbers of Prices. Pub. Amer. Statis. Assoc.,

March. [Reprint of a valuable summary of the subject in the British Report on Prices in 1902.]

KOLLMANN (P.). Das deutsche Volkszählungswerk von 1900. Jahrb. f. Gesetzg., 1904, Heft 2.

LOSERTH (G.). Zur Statistik der Bücherpreise. Zeits. f. d. ges. Staatsw., 1904, Heft 2.

UNSIGNED. Course of Wholesale Prices, 1890 to 1903. Bull. U.S. Dept. Labor, March. [Brings the serial compilations to date on the Department's modification of the Aldrich Committee scheme of prices.]

XIV. NOT CLASSIFIED.

ALMÉRAS (H. d'). Le mariage chez tous les peuples. 2^{me} edition. Paris: Lehleicher. 1904. 18mo. 3.50 fr.

CHARDON (H.). Les travaux publics. Essai sur le fonctionnement de nos administrations. Paris: Perrin. 1904. 16mo. 3.50 fr.

DU BOIS (W. E. B., editor). The Negro Church. A Social Study made under the Direction of Atlanta Univ. Atlanta, Ga.: Atlanta Univ. Press. 1903. 12mo. pp. 212. 50 cts.

[A valuable contribution to our knowledge of the negro problem.]

HOWARD (G. H.). A History of Matrimonial Institutions. Chicago: Univ. of Chicago Press. 1904. 8vo. 3 vols. pp. 1500. $10.

[See "Notes and Memoranda."]

PEASE (E. R.). The Case for Municipal Drink. London: P. S. King & Son. 1904. 12mo. pp. 166. 2*s*. 6*d*.

[An interesting study of English conditions.]

RIPERT (G.). Les plus-values indirectes résultant de l'exécution des travaux publics. Paris: Rousseau. 1904. 8vo. 3 fr.

WELLS (H. G.). Mankind in the Making. New York: Scribner's. 1904. 12mo. pp. 392. $1.50.

In Periodicals.

MARSH (B. C.). Causes of Vagrancy and Methods of Eradication. Ann. Amer. Acad., May. [Mainly an elaborate classification of vagrants, of the causes of vagrancy, and of the measures of reform.]

MÜNSTERBERG (E.). Bericht über die 23. Jahresversammlung des Deutschen Vereins für Armenpflege und Wohltätigkeit. Jahrb. f. Gesetzg., 1904, Heft 2. [Special attention given to the Elberfeld system.]

PAGE (W. H.). The Cultivated Man in an Industrial Era. World's Work. July. [An interesting defence of industrialism.]